An Address

ON THE

PATHOLOGY OF PULMONARY PHTHISIS: A RETROSPECT.

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BY I. BURNEY YEO, M.D., F.R.C.P. LOND.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE IN KING'S COLLEGE, LONDON.

GENTLEMEN,—In casting about for a subject which might fitly occupy your attention at this your annual meeting, and form the main topic of the address which you have done me the honour to invite me to deliver, it occurred to me that a brief retrospect over a very remarkable chapter in the history of medical pathology might not prove uninteresting or uninstructive. I do not propose to ask you to follow me into a very remote retrospect; this backward survey will be limited to a period extending over very little more than a quarter of a century. But a few words of historical introduction may, however, be advisable in order to give something of coherence and completeness to the account I wish to present to you.

The subject I am thinking of is the Pathology of Pulmonary Phthisis. In the spring of the year 1873 a protracted discussion took place at the Pathological Society of London on the "Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lung," and whoever will take the trouble—and it is certainly not an easy task—to read through the reports of this discussion can hardly fail to be struck with the extraordinary confusion of opinion and ideas therein presented. The period at which this discussion took place was an interesting one in the history of modern pathology, because I think it may be regarded as a critical period in the reputation and influence of the study of morbid histology as a pathological guide. At that time the whole field of pathology seemed, in the minds of many of the best reputed observers, to be identical with that of morbid anatomy and histology, with which it was then in imminent danger of being confounded, whereas it need hardly be said a true philosophical pathology takes in a far wider range. At that time the many earnest workers in the domain of morbid histology received perhaps rather more than an adequate meed of praise. Indeed, it was only by work of this kind that the young pathologist could hope to obtain any credit, and it followed as a consequence that the anatomical analysis of morbid products and the inferences drawn from them were pushed to an extreme, the evil results and the confusion attending which are well exemplified in the discussion to which I am now calling your attention. You must not suppose that it is merely an opinion of my own—that a sad confusion of ideas had been produced by an ill-considered and a too entire reliance on the results of histological analysis. It was recognised by the introducer of the discussion, Dr. Wilson Fox, and by others. "I would ask," Dr. Wilson Fox says at the end of the discussion, "is any chaos greater than the present?" and he adds: "I have often pitied the 'intelligent student' to whom we have appealed as our test of the definitiveness of our views." And, again, he asks, "Is there no way out of this confusion?" An eminent pathologist expressed his belief that "the use of the term tubercle tended to cause" this confusion, and proposed to discontinue its use. Another speaker of much authority also wished to throw overboard the word "tubercle." "At present," he says, "we are confused, hedged in, or hampered in a manner which is altogether ludicrous. Nobody knows what another means when he makes use of the word 'tubercle.' We cannot explain our views on the subject without entering into tedious statements concerning conflicting views." But as time has shown, the fault was not in the word "tubercle," but in this too exclusive method of investigation, in the then prevailing belief that nothing could be known of pathology outside the field of morbid anatomy and morbid histology. I was myself strongly convinced at the time of the dangers associated with this tendency, and I ventured to point out in that discussion "that the differences of opinion that existed amongst observers were greatly due to the circumstance that they had been looking too exclusively at one side of a many-sided subject," and "that they would be more likely to comprehend the true import of the anatomical evidences, the last words, as it were, of a disease when they regarded them in the light of the various circumstances that had attended its whole life-history."

But before we pursue this subject further let us take a very brief survey of the history of the prevailing opinions as to the pathology of phthisis during the first half of the present century. We will not go further back than the first publication of Laennec's views in 1811. In him we find the great originator of the idea of the unity of phthisis. All phthisis he regarded as "tubercular." He looked upon "tubercle" as an "accidental product"—foreign to the normal state and having no analogue in the healthy body—and the many modifications found in the lungs and other organs in the case of tuberculosis as caused by the evolutions of a unique heterogeneous substance, "tubercular matter." Laennec, with the insight of genius, saw identity of nature amidst apparent diversity of form and aspect, and he taught that isolated tubercle, miliary tubercle, grey granulations, and tuberculous infiltrations, grey and yellow, were all of the same pathological nature and origin. "The synthesis which he constructed of the different tuberculous processes has triumphed over all the attacks which it had to undergo, and has only now found its definitive confirmation in the most brilliant conquests of *modern technique*"[1] Laennec also maintained that tubercle was not only a substance foreign to the organism, but that it led a *special* life; the idea of its *specific* nature was distinctly in the mind of this great observer. These opinions of Laennec were violently attacked by Broussais (1826), whose views met with considerable favour in this country. Broussais maintained, in opposition to Laennec, that tubercle was purely and simply the result of inflammation, and that organs "irritated" to a certain degree and for a period more or less long ended by becoming tuberculous when they were so disposed. Tubercle, he said, was caused by chronic inflammation of the air passages, and was not therefore in any sense "specific." Broussais also, like a certain more recent observer, incriminated the pulmonary lymphatics in the tuberculising process. Tuberculisation, he affirmed, was attended by an inflammation of the lymphatic capillaries. The two essential points in the doctrine of Broussais as to the nature of pulmonary tuberculosis—viz., irritation as the cause and a lymphatic product as the effect—have held up to quite recent times a prominent place in the history of the pathology of phthisis. Louis shared the views of Laennec, but Andral, Cruveilhier, and Bouillaud (1837), and many others held with Broussais that tubercle was a result of inflammation and therefore non-specific. In 1844 Lebert attempted to demonstrate a specific histological structure in tubercle, but in this he signally failed, and his observations and conclusions were soon shown to be erroneous. In 1850 Laennec's doctrine was vigorously attacked by Reinhardt, and later by Virchow, the great authority attaching to whose name no doubt shook unduly the confidence which up to that time many had felt in the teaching of Laennec. Reinhardt declared that most of the anatomical appearances recognised as tuberculous were essentially inspissated pus, together with epithelial cells, filling the pulmonary alveoli, and were the results of catarrhal pneumonia. Virchow limited the application of the word "tubercle" to the grey granulation, and all the other forms of tuberculisation met with in phthisical lungs he declared to be the inspissated products of inflammation; he taught that pulmonary phthisis might be due either to the evolution of tubercle or to caseous hepatisation; and that phthisis, properly so called, was rather the result of caseous hepatisation than of tubercle. He reserved the name "tuberculous" to acute miliary tuberculosis. The idea of the unity of phthisis as in all cases a tuberculous disease was declared by him to be erroneous and the greater part of pulmonary phthisis to be due to inflammation. Thus we see that for Laennec and his followers there was but one kind of phthisis—i.e., tuberculous; and for Virchow and his followers there were at least two, one a caseous pneumonia and the other a rarer form—i.e., the tuberculous.

It was at this time that Niemeyer's teaching became prominent, and he maintained that phthisis depended on the caseous degeneration of the products of simple inflammation; that when in a phthisical lung the grey granulations

[1] Herard et Cornil, "La Phtisie Pulmonaire."

and pneumonia co-existed the granulations were secondary and consecutive; and so arose his famous dictum that "the greatest danger to which a phthisical patient could be exposed was that he should become tubercular"; and so it happened that in this country, as in Germany, Laennec's doctrine was discredited and the belief in the duality of phthisis or in "varieties" of phthisis became very general, and modifications of the inflammatory process were considered to be the chief agents in its causation.

In France, however, the most distinguished pathologists rallied to the standard of Laennec and maintained the unity of phthisis as a tuberculous disease; this was greatly due to the labours of Grancher, who, by studying and comparing the tuberculous granulation with a fragment of caseous pneumonia, without any apparent granulation, was able to formulate the law that "a nodule of caseous pneumonia has the same structure as the typical tuberculous granulation." This opinion soon secured the support of Rindfleisch in Germany and of Wilson Fox in this country, and somewhat later it had the vigorous support of Charcot, who was then professor of pathological anatomy in the Paris Faculty.

We thus reach the period of the discussion in the Pathological Society of London in 1873. But it seems desirable before referring to this event to go back a few years to 1866, to the period when Villemin claimed to have discovered the inoculability of tubercle; for this may be regarded as the initial step in connexion with a vast amount of careful investigation, which led ultimately to the discovery, published some sixteen years later, of the true nature of tubercle and the true pathology of pulmonary phthisis. The sensational character of Koch's discovery and the world-wide fame that justly followed it threw somewhat into the background the merit of the distinguished Frenchman whose investigations into the inoculability of tubercle started the labours of pathologists in the right direction towards the discovery of the truth. Speaking of Villemin's work Cohnheim says: "It was at this epoch (1860–1870) that a discovery was made in France, whence will date, if I am not mistaken, in the history of tuberculosis, not only an incomparable progress, but also a complete transformation in our manner of regarding this disease. Few discoveries, indeed, were capable of stirring medical opinion to so great a degree as the demonstration by Villemin of the transmissibility of tuberculosis." Villemin's observations form so important a step in the modern advance towards a true pathology of phthisis that it may not be uninteresting to give here his own account of his method of procedure, more especially as it was soon after to be imitated in this country with the remarkable result of negativing the true conclusions of Villemin, and so leading to a retrograde movement and to a retardation of the acceptance of the true pathology of phthisis. For Villemin's conclusions were correct, whereas the conclusions of his critics and imitators in this country were erroneous. Villemin, in describing his own procedure, says: "If we make in the ear of a rabbit, or in the groin or axilla of a dog, on a very narrow surface previously shaved, a subcutaneous wound, so small and shallow that not the smallest drop of blood shall appear, and if we insinuate securely and carefully a portion of tuberculous matter the size of a pin's head taken from a cow or a rabbit, already rendered tuberculous; or if, on the other hand, with a hypodermic syringe we instil under the skin of an animal a few drops of phthisical sputum, made more fluid by the addition of a little water, this is what we observe. The day after the operation the most careful palpation finds no trace of the matter inoculated—the margins of the wound are united—then, after at most four or five days, a slight swelling is observed, accompanied sometimes by heat and redness—and we can watch the progressive development of a local tubercle, varying in size from that of a hemp-seed to that of a filbert. For some time after the inoculation the animals present no appreciable alteration in their health. It is only at the end of from fifteen to thirty days that they are seen to be losing flesh. Some recover from this and put on flesh; others go on getting progressively weaker and fall into a state of marasmus, are often attacked with colliquative diarrhœa, and perish in a state of extreme emaciation. On post-mortem examination we find that the tubercles at the seat of inoculation are formed of a caseous mass around which are very often seen small yellowish granulations infiltrated for some distance in the inter-muscular connective tissue. The lymphatic glands communicating with the seat of inoculation are frequently swollen, present scattered granulations or tuberculous nodules, and sometimes end in complete caseous transformation. We generally find tubercles in the lungs, but the eruption of tubercles is not limited to those organs. It appears more or less abundantly in the lymphatic glands, the intestine, the liver, the spleen, the kidneys, &c. These organs are often stuffed with tubercles. The serous membranes, and notably the omentum and the mesentery, are sometimes riddled with innumerable granulations. According to the lapse of time since the inoculation and the greater or less rapidity with which the eruption occurs, we find the tubercles either grey and transparent, or yellow, caseous, and softened, or ulcerated and excavated. If the animals are killed before the fifteenth day it is rare to find tubercles in the organs. There elapses between the time of inoculation and that of the tuberculous eruption a certain time, which has appeared to us to vary from about ten to twenty days." Surely this is a striking picture of an infective parasitic process. It was found that caseous matter had the same infective property as the grey granulations. An important and influential academic commission confirmed the results announced by Villemin. Objections to his conclusions, however, arose in various quarters, and in this country Wilson Fox and Burdon Sanderson sacrificed a great number of rodents with the object of testing the correctness of Villemin's observations and inductions, and the results they arrived at had the effect, they maintained, of negativing his views. They stated that the results he had obtained were not peculiar to tubercle, but might be produced by almost any substance—pus, fragments of bone, bits of cork, of india-rubber, &c.—but it has now long been admitted that these observations and experiments of Fox and Sanderson, which produced so great an effect on professional opinion in this country at the time, and which were thought by many to be fatal to Villemin's conclusions, were themselves valueless on account of the absence of those antiseptic precautions which have since been shown to be needful in the conduct of such experiments.

Surely this is a remarkable lesson in the history of pathology! An extremely competent and careful observer, after a carefully planned, well-ordered, and minutely methodical series of observations, announces results and conclusions which prove to be absolutely true and accurate. Shortly afterwards other competent and careful observers make a long series of professedly similar observations and publish results which, it is maintained, negative the conclusions of their predecessor. As a consequence the progress of truth is retarded and error confirmed in men's minds. Villemin, however, found an able defender in Chauveau, whose skilful experiments and observations on the transmissibility of tubercle in oxen and horses afforded ample corroboration of the conclusions of Villemin. While these facts were fresh in men's minds the discussion at the Pathological Society of London was instituted in 1873, and it will surely be of some interest to examine briefly some of the opinions expressed by the eminent men who took part in that debate.

Although it was nearly ten years later that the parasitic and infective nature of tubercle became incontrovertibly proved through the discovery by Koch of the bacillus of tubercle, the idea that tubercle was of this nature was prominent in many minds at the time of this discussion, and it is not a little remarkable that this idea should be almost ignored by those who took part in this debate. Indeed, it is clear that the accuracy and conclusiveness of Wilson Fox and Sanderson's observations and experiments on the rodents are assumed by the debaters generally, and Villemin's labours and results are scarcely alluded to. In his two long speeches at the beginning and close of the discussion the introducer never once mentions the name of Villemin. It is exceedingly interesting in connexion with this chapter of pathology to find the opener of this debate, evidently after much tribulation of mind and sorely against his preconceived views, forced to the conclusion from the results of his own elaborate and very careful observations that phthisis is, in all its forms, one and the same disease—i.e., a tuberculous one; so that, although with some hesitancy and here and there a little lack of clearness, the outcome of his researches was to re-establish the doctrine of Laennec of the unity of phthisis. "Fifteen years ago," he says, "I came from Germany strongly impressed with the opinion that phthisis might be sub-divided into many absolutely diverse diseases—diseases diverse in their essential nature as well as in their apparent origin. I had a great many terms at the end of my tongue—broncho-pneumonia, caseous pneumonia, and scrofulous pneumonia,—but when I myself became a teacher I felt great

doubt and difficulty in saying what was not tubercle, and still more in saying what was tubercle. I came at last to the conclusion not to speak as I did in my earlier days, describing a lung as containing no tubercle because it did not contain what I imagined to be the only type of tubercle." And elsewhere he says: "It was my anxious wish to do something in my day and generation towards finding out a great many varieties of phthisis." It is needless, now that we know the true criterion of tubercle, to follow this most careful and conscientious observer through the laborious and minute anatomical and histological investigation which led him, in common with Rindfleisch, Charcot, Grancher, Cornil, and others, to the conviction of the unity of origin of the morbid processes which constitute phthisis; but these views as to the unity of phthisis were not acceptable to the majority of the authorities who took part in this debate. In a very lengthy and elaborate speech a well-known pathologist dogmatically asserted that phthisis was an affection "of which tubercle could no longer be considered as the pathological essence. ..... Laennec's central idea had been shown to be erroneous. ..... Phthisis had now been fully shown to be a non-tuberculous affection." His conclusions were that "the common varieties of pulmonary phthisis were to be regarded as due almost solely to various forms of chronic inflammatory changes in the lung; tubercle was to be regarded as a mere occasional and quasi-accidental complication; both phthisis and tubercle were robbed of their so-called 'specific' attributes." He found it "difficult to come to the conclusion that the products (after inoculations) found in rodent animals have any real right to be considered tubercle." This speaker showed, in perhaps an exaggerated form, the tendency which was then so strikingly prevalent with most pathologists to regard nothing as "specific." There existed at that time a widespread dislike, almost amounting to hostility, to the idea of anything being of a "specific" nature, either in pathology or therapeutics. We see this cropping up again and again in this discussion. At that time nothing was "specific," now everything is "specific." Another authority we find also maintaining "that tubercle could not be regarded as the essential specific element in phthisis." He thought that "much of the inveteracy of phthisical lesions would be explained without the aid of any precedent deposit of tubercle." He was disposed to refer the causation of these destructive changes in the lungs to the accumulation in the alveoli of simple, catarrhal products which "accumulated, decayed, and irritated the alveolar wall and set up those proliferative and inflammatory changes which constitute local tubercle, &c."

The veteran Dr. C. J. B. Williams believed that the "consolidation of scrofulous pneumonia and similar low inflammations induce consumption of the lung in the same mode as tubercles" and he was therefore opposed to the idea of unity. Another pathological authority leaned towards the idea of unity, but he would discard the use of the word "tubercle" and he looked upon "the various anatomical changes met with in the lungs in phthisis" as the "result of inflammation." The idea of unity was strongly opposed by Dr. Cayley who would restrict the term "tubercle" to the grey granulations and thought the changes in the lungs in many cases of phthisis as "entirely due to inflammatory processes" and that in some cases tubercles were developed secondarily to inflammatory changes which constituted the primary affection.

In a very interesting contribution to the debate, the late Dr. Moxon ranked himself boldly on the side of unity. "He believed all phthisis was tuberculous" but he thought the "notion of tubercle as a specific growth" had received a serious blow from the results of the inoculation experiments of Sanderson and Wilson Fox, and thus we see this acute observer led astray by the prevailing antagonism to the idea of specificity and by his belief in the results of experiments which proved to be fallacious. He thought the term "fibroid phthisis," unfortunate—"it was nothing more than old phthisis," in which a good deal of fibre was necessarily present; "fibroid phthisis was only phthisis with its age forgotten." This is a view which is now very generally accepted.

From these brief extracts from this debate you may form a good notion of the differences of opinion that existed less than twenty-five years ago amongst eminent pathologists as to the true pathology of phthisis. They show how little finality, definitiveness, and agreement were obtainable from having exclusive regard to the histological characters of the changes attending this disease. As I have already said, it is remarkable how little reference is made in this debate to the infectiveness of tubercle, to which, however, attention had at that time been strongly directed in many quarters, and which fact in the life-history of this disease contained within it the real truth as to the pathology of phthisis.

Before passing away from this stage of our pathological retrospect I ought, perhaps, to summarise the chief conclusions arrived at by Dr. Wilson Fox in the debate as to the nature and origin of tubercle. He had such a tender respect for the opinions of others that there was a certain hesitancy in pressing home conclusions at which he had arrived out of regard for those who upheld the contrary; it was on this account that some complained of a want of clearness in his statements. Charcot, who held the same opinion as to the unity of phthisis, expressed to me his regret that Wilson Fox had not expressed himself with greater clearness and emphasis. Wilson Fox himself characteristically observed at the end of his argument—"There are no subjects in medicine which would, I think, so dispel a spirit of dogmatism and exclusive adherence to one's own opinions as the study of phthisis, on which such differences have existed, and do exist, among the greatest men of the past and present, as may well make anyone doubt the accuracy of his own observations and the justness of his conclusions." The following is the manner in which he formulates the doctrine of unity: "The destructive changes in the lung characterised by the term 'phthisis' are almost invariably associated with, and in great measure caused by, a series of cell-growths which in their anatomical structure and vital characteristics are practically identical in all the forms of the disease." Caseation he regarded as due to the destruction of the capillaries of the new formation, and he recognised that the new growth was capable also of undergoing a development into fibroid tissue. Tubercle he defined to be "a lymphatic overgrowth produced by irritation under special circumstances of anatomical or constitutional predisposition ..... when you give rise to irritation in cases where lymphatic irritability is excessive under these circumstances you may get tubercle. You may therefore get it from a blood state in which the relations of the lymphatics are abnormal, or you may get it locally by exciting inflammation." "The anatomical and vital character of those tubercular growths are distinctive, but they cannot be called specific," but "cases where any close similarity exists between simple inflammation and tubercle are, however, rare, and even then it is a superficial resemblance rather than an identity of structure." "In those acuter forms of phthisis—the so-called scrofulous pneumonia—the process is identical step by step with the majority of the processes that occur in acute tuberculisation, and differs from it only in the extent of pneumonic exudation." "Chronic phthisis is distinguished by the characteristics of induration of the lung ..... the chronicity depending upon induration of those growths rather than on their acute destruction." "Every indurated form of phthisis, most cases of so-called fibroid phthisis of some English authors ..... come under the category of indurating tuberculosis." He denied or doubted the origin of phthisis in catarrhal pneumonia, scrofulous bronchitis, and scrofulous pneumonia. He pointed out that "the products of ordinary inflammation are in the lungs, as well as in the serous and mucous membranes, almost always found co-existing with tubercle ..... the tuberculous growth is something super-added to this, and gives to the pneumonia characteristic features ..... Anatomically, pneumonia is not tuberculous unless that growth co-exists in the alveolar wall."

The great merit of Wilson Fox's conclusions was that they went far to re-establish the unity of nature and origin of phthisical processes in the lungs—they went to disprove the then common belief that pulmonary phthisis could originate in ordinary inflammation, and they disposed of much of the erroneous opinion then existing about "caseous pneumonia," "scrofulous pneumonia," "fibroid phthisis," and the like. The confusion that these terms had given rise to and the false impressions some of them had produced on the professional mind were remarkable. I have known medical practitioners ask the question with regard to an unusually rapid form of phthisis, with extensive diffuse infiltrations, whether one did not think it might be "pneumonic" and not "tuberculous"? and this was asked with the impression that the "pneumonic" form was less virulent and more curable than the tuberculous, whereas it is precisely these so-called pneumonic forms of phthisis, as we

know, which are so rapidly fatal. With regard to the real nature of the infective property of tubercle, Wilson Fox was led away from the truth by the results of his experiments on the rodentia, and by the fact that he shared the then prevailing reluctance, almost amounting to actual hostility, to regard anything in pathology as specific. On this point he says, "You may get a tuberculous gland secondary to any common irritation in a predisposed subject ..... any irritation of the tissue may, in the presence of local or constitutional predisposition, give rise to secondary growths diffused or circumscribed which constitute tubercle, and which may be the source of further infection." ..... "Specificity," he said, "is negatived etiologically in every phase of its history except the hereditary tendency, and how far back this reaches it is impossible to say, but that the disease may arise *de novo* under various unhealthy influences none of which can be called specific is a fact which I think no one can deny!" We now know that much of this teaching is erroneous. The idea of the infectivity and transmissibility of tubercle, so little dwelt upon in this discussion, had however taken deep root in the minds of many of the Continental pathologists and between the date of this discussion (1873) and the announcement by Koch of the discovery of the bacillus of tubercle in 1882, a great deal of good work was done in this direction with the effect of preparing men's minds for the great event. I have already alluded to Chauveau's observations in corroboration of those of Villemin. Observing that the infective virus was sometimes found in the fluids of the phthisical, he came to the conclusion that this consisted of very minute particles "imperceptible even under the microscope, inert in appearance, but endowed, in reality, with a singular virulence." Buhl in 1873 and Klebs in 1875 expressed their belief that bacteria were the cause of tubercle, and that they probably existed in the caseous masses. In 1877 Klebs professed to have isolated and cultivated the "monas tuberculosum," but he failed to establish its specific character. Toussaint (1881), Baumgarten and others also discovered microbes which they thought might be the active agents in tuberculosis. Professor Bouchard in 1881 argued vigorously on general grounds that phthisis must be classed amongst the infective diseases, and the next year (April 10th, 1882), R. Koch announced to the Physiological Society of Berlin that he had succeeded in isolating and cultivating the microbe of tuberculosis, and it was thus left to a German to give absolute demonstration of the causal unity of phthisis in all its various manifestations, as had been taught, at the beginning of the century, by the great Frenchman Laennec, and this great event may fitly close the strictly pathological part of our retrospect. It is not possible to over-estimate the importance of the results which followed this discovery. The discovery of the true pathology of phthisis has been attended with practical advantages of the most remarkable kind; a flood of light has been thrown on its etiology, and the knowledge of the true nature and mode of propagation of this disease has led to a vast improvement in our methods of dealing with it, both in the way of prevention and cure. This is proved by the striking reduction in the death-rate from phthisis. From 1858 to 1860 the death-rate per million from phthisis was 2565; from 1889 to 1893 the death-rate had sunk to 1512, a reduction of 41 per cent. The recognition of the infective and communicable character of the disease has doubtless had a great share in producing this admirable result.

The methods now adopted for dealing with phthisical sputum, which often swarms with myriads of infective organisms, is an important check to the spread of this disease. It should be—and in many public institutions and private houses is—collected in spittoons containing a solution of carbolic acid or corrosive sublimate or some other disinfectant and subsequently burnt. Pocket-handkerchiefs should also be disused or specially prepared paper ones used, which can be at once burnt. The careful examination into the quality of meat and milk provided for the use of the public has no doubt tended to check the spread of tuberculosis by means of these agents, especially amongst children; whilst the practice of sterilising milk for the use of the poorer classes must have an excellent effect in the same direction. The possibility of the communicability of phthisis from one person to another, in most cases probably through the agency of the sputum, is now well recognised, although at first the evidence in favour of such occurrences was strongly contested. Indeed, I remember hearing a very eminent physician, now dead, publicly state it to be his belief that, supposing the communicable and contagious character of phthisis to be established, it would be a calamity for the public to become acquainted with the fact, and he doubted the propriety of medical men conveying such information to their patients, for he feared lest the distress and sufferings of the phthisical should be increased by finding themselves shunned as objects of danger. Now it appears to me that we have no right whatever to keep from the public information of that kind, and while we have long been urging on the public the necessity of the observance of most careful measures to avoid the spread of the more generally recognised contagious maladies it would be most inconsistent and unjustifiable not to explain to them the degree and extent to which this disease, which carries off a greater number of victims than any other, is infective and transmissible. The public are now pretty well informed on this matter, and I am not aware that phthisical patients complain of receiving less care, attention, or sympathy because of this. One thing I believe the spread of this knowledge amongst the general public has done, and that is to diminish greatly the number of marriages between the phthisical. Much greater care is now observed by the heads of families and others in preventing such very undesirable unions.

I find in the annual health report (1895) of Dr. Boobbyer, the medical officer of health of Nottingham, the following:—"Circulars are now issued to houses in which consumptive patients are known to be domiciled, setting forth the precautions to be observed in order to guard against the infection given off by the patients, and whenever the disease is known to have proved fatal, an offer is made to disinfect the part or parts of the house that have been used by the deceased free of charge. The public response to this offer, which has continuously increased from the outset, indicates a growing appreciation of the necessity for such precaution in the case of this most distressing and fatal disease."

COPY OF CIRCULAR.

BOROUGH OF NOTTINGHAM. PREVENTION OF TUBERCULAR CONSUMPTION.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should be received into a vessel containing a strong solution of carbolic acid (1 of carbolic to 20 of water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be aired every day, and disinfected and cleaned at least once a month.

In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

PHILIP BOOBBYER, Medical Officer of Health.
Guildhall, Nottingham.

A considerable improvement also in the results of treatment has, I am satisfied, been the consequence of our more accurate knowledge of the pathology of phthisis. The very general adoption of aseptic and antiseptic measures in the treatment of phthisis has, I am satisfied, been followed by far more satisfactory results than we used to get before such remedies were used. No one now doubts the advantage of the open air method of treating pulmonary phthisis when this can be carried out in suitable localities where the air is aseptic and enjoys at least a relative freedom from the presence of germs. The systematic employment of antiseptic inhalations and the internal use of such agents as creosote and guaiacol have no doubt some influence in checking the diffusion and diminishing the virulence of the infective processes in pulmonary tuberculosis. The course of the disease is retarded and time is thus gained for the establishment of indurative changes in the tuberculous infiltrations, and this is the natural method by which phthisis is arrested and cured.

But it is not my purpose to-day to enter upon any therapeutical discussion, it has simply been my desire to call your attention to what I think is a remarkable chapter in the history of medical pathology; a chapter which shows how dogmatic and assertive scientific men may become and into how great errors they may fall when they trust too implicitly to certain favourite methods of investigation and follow too partially their own preconceived notions. There is always some risk of fallacy if we attempt to determine the true nature of a series of phenomena when we only look at a limited part of them. For instance, the inability to recognise the specific nature of tubercle, and the tendency to positively deny it

which appears so frequently in the discussion to which I have referred, had no real foundation in the thing itself. Pathologists rejected this very precise and definite view, which Laennec had asserted and Villemin had gone far to establish, for such indefinite ideas as are to be gathered from the words "inflammation," "irritability," "irritation," "disposition" or "predisposition" and the like. What, in the shape of precise knowledge, do such terms convey? What was there so fascinating in the word "inflammation" that it should have been adopted as able to cover all the facts in the life-history of phthisis? What exact information as to causal relations does it convey to our minds? Why, again, was there such great hostility manifested to the idea of specificity? It seems to me very difficult to find satisfactory answers to these questions.

I have been able, I think, to show into what errors these tendencies led some of the most able, and certainly some of the most laborious, pathologists of our time. With the new and exact methods of experimental research which we now possess we seem to be able to arrive at conclusions more definite, more certain, and less hypothetical, and we use terms less vague and indefinite, but even with those methods at our disposal we should learn from the past the need of great caution against forming too hasty or too positive conclusions in all subjects which present any scope for controversy. I think I have shown how easy it is even in careful scientific researches to make many false steps; let us then at all times walk circumspectly and warily.

MOTOR AND SENSORY APHASIA (WORD-DEAFNESS, WORD-BLINDNESS, AND MIND-BLINDNESS).[1]

BY ALFRED MANTLE, M.D. DURH., M.R.C.P. LOND.,
PHYSICIAN TO THE ROYAL HALIFAX INFIRMARY.

ALTHOUGH in each of the following two cases of aphasia there was a combination of motor and sensory disturbance, it is chiefly on account of the sensory derangement of speech that I have recorded them.

CASE 1.—The patient was a well-built man, aged forty-one years, who a little more than nine years before had some slight epileptiform convulsions; after one of these attacks he had paralysis of the right arm and leg and was aphasic. The aphasia, however, was not so lasting as in the attack I am about to describe, for he went to work in fourteen weeks, having recovered speech completely and the power of the right arm and partial power of the leg. Five years afterwards he had another, but much slighter, attack, lasting a fortnight, when speech was again affected and paresis of the right side occurred. His health receiving a great shock he gave up the very active work he was engaged in and had a long rest. He practically recovered and worked fairly hard again, but complained of headaches and giddiness. The viscera were healthy, and there was no evidence of syphilis. The attack I now relate commenced on Oct. 29th, 1892, with no marked premonitory symptoms. He was gloomy the day before, and shut himself up, and drew some curious pen-and-ink sketches, but he did not complain of his head. He retired to bed, and his wife roused him early next morning, as he had an appointment, and she discovered that he was perfectly conscious, but speechless; she noticed that the tongue was drawn to the right side, but the features were quite straight. There was slight numbness all down the right side, but power enough in the hand to write slowly. I was called in to see him at 8 P.M. I found complete motor aphasia—i.e., he had lost all power over the motor part of speech, and the only sounds he could utter were "o" and "a" fairly well and "u" indifferently. The tongue could only be partially protruded and deviated to the right, and the lips did not move. There was slight loss of power in the right leg, but less marked loss of power in the right hand. He could, however, write slowly with this hand, and he asked me several questions in writing which were intelligent and written correctly. He complained of the back of the head being painful and of having a burning sensation in that region. During the first week he was very emotional and easily excited, and at the end of the week he was very drowsy and difficult to rouse, and the paralysis of the right side was complete both for motion and sensation. There was marked rigidity of the right hand and arm, and the thumb was firmly contracted into the palm. The left hand was very tremulous and deficient in power, and sensation was diminished on the left side, but not so markedly as on the right. A curious spot of hyperæsthesia was discovered by the nurse on the inner side of the right knee, this being so sensitive that if touched ever so lightly he would spring up in bed and suffer agonising pain. He was now in a very sensitive condition, for the movement of lifting him up in bed to change his position had an extraordinary effect upon him and produced a drowsy and more or less unconscious condition which was very marked during the whole of the second week. Motor power, however, on the left side was practically normal and he could write slowly with the left hand. From the third week he gradually improved, gaining steadily more power in the right leg and arm and recovering sensation. He was much interested in all that was going on, reading daily papers and discussing topics of the day by writing with the left hand, for he was very little, if any, better so far as his aphasia was concerned. There was, however, during this period of motor recovery a good deal of sensory disturbance, particularly from the eighth week to the eleventh, when another condition developed—namely, that of sensory disturbance of speech. It was noticed that he was slightly deaf on Jan. 19th, which increased during the day and became complete on the following day. Dimness of sight was also observed, and he suffered a good deal of pain in the head. Next morning he could not read writing, however large, but could read words composed of large printed letters, but these were only of use until 3 o'clock in the afternoon, when they could no longer be seen. On the following day sight and hearing were gone on both sides, but a lighted taper passed before his eyes produced a pupil reflex. The ophthalmoscope showed the fundus of both eyes to be normal. There was a good deal of difficulty in swallowing. He had a fixed staring look, straight out, and was always plucking at the bedclothes with the left hand, a meaningless sing-song being heard at intervals. He now continued to be deaf and blind for ten days, and could only recognise his wife and nurse by the sense of touch, feeling their hands and articles of dress. On the eleventh day he showed signs of delight when the blind was drawn up and light admitted, and he could then recognise the difference between the hands of his wife and nurse. He was still deaf to words, but could hear sudden sounds. On the twelfth day he heard and seemed to recognise his own name, and he also noticed details in the dress of those about him. On the next day he saw colour in some tulips placed before him, which evoked grunts of satisfaction. Pointing to his ears and eyes he asked with his finger on the coverlet why he was deaf and could see so badly. Fourteen days after the loss of hearing he heard sounds at a distance, a dog barking, whilst he was comparatively deaf to sounds at his bedside, and on the following day he asked by making the outlines of the letters on the coverlet of the bed with his finger why he heard sounds (at the same time pointing towards the next house, where a piano was being played) yet could not tell what was said by those about him. He had now extended vision, pointing to pictures on the wall facing him, but the field of vision was very limited, and it was found he had right hemianopsia. He continued to be very deaf to ordinary word sounds, but the experiment of whispering the word "better" slowly in the right ear was tried. He heard it, and immediately began to write with his finger on the coverlet the whispered word, and showed signs of gratification. The same word spoken in natural tones produced an expression of pain and bewilderment. His mind continued to be very clouded, and he was unable to understand day from night or the time of day. Feb. 9th was the last day he made known his thoughts by drawing with his finger the outlines of letters forming words. He had during the day thought out and written a number of questions and was somewhat exhausted. His left hand (which he could alone use) was said to be rigid in the evening, the rigidity passing off very soon, but next day his sight was very much worse, and all hearing had gone again. He now had a slight attack of influenza, which was prevalent at the time. He could no longer form the outlines of letters, and the only way he could express his thoughts was in pantomime. He, like an uneducated deaf-mute, made pictures in the air to express his

[1] A paper read before the Medical Society of London on Nov. 23rd, 1896.

wants, and his wife understood his drawings in a wonderful manner. Wishing for a chop, he drew the shape in the air. Wanting milk and soda water, he pointed to the sheet for whiteness, and drew in the air the shape of a soda-water syphon. Before losing all sight he had enjoyed seeing and arranging a bunch of lilies of the valley. He evidently remembered this and drew in the air the shape of lilies of the valley, arching the stems and dotting them with flowers. His wife understood and brought the flowers to him, when he was quite satisfied and arranged them with care. His sight again came back, but he was still suffering with right hemianopsia. Although an omnivorous reader when well, he did not recognise when tried either letters or figure symbols, and when a paper was given him he turned it upside down, and by gesture asked why it was given him. There were now (the end of February) distinct signs of recovery from motor speech, and he uttered his first word, "better," distinctly enough to be understood. The right leg and arm also had much more power, but the arm was exceedingly sensitive to touch. He understood whispered language more easily, but he was unable to recognise words in the ordinary strength of tone. Although deaf to words, he interpreted tones and gesture so well as to be conversant with much that happened. In March mind blindness was most marked, though he had not so much difficulty in remembering objects as persons. His aunt, to whom he was very much attached, was allowed to see him. He did not recognise her, but after she had left the room he drew, with a pencil in the left hand, the house in which she lived, with the road to it—the garden and the dog at the gate—which was a very fair description of her abode. During this month his deafness gradually improved, but he was more deficient on the left side than on the right. The sense of smell was impaired on the left side. He saw better, but had yet word-blindness. He was able to articulate more and used and understood more words, but he made use of pantomime as well. The very sensitive spot on the inner side of the right knee, which had remained so all these months, could now be touched, he having asked the nurse to lay her hand lightly upon it for trial. He tried to count, but it was difficult, especially on more than one hand. He soon became more inquiring and asked "what was it he used to do." When told "to paint" he remarked "what was that?" Upon pursuing the subject he was told he used to read books, when he replied "that sounded like it." He was now getting up daily and was greatly interested in building with dominoes. He took a little more interest in things, but at the end of March (five months after the attack commenced) he still had forgotten that he ever was a painter. He was one day anxious for a certain picture to be brought to him which as a matter of fact he had painted, but when asked if he painted it he emphatically stated no, but that he remembered seeing a man paint it. He was very anxious to know what a book was. In April he noticed the lettering upon half a crown, given in his hand, when he asked to have it read to him, repeating each letter after the nurse and committing them to memory and comparing their form with other letters; he asked if these were what were contained in books. He could not remember his own surname, and when told his wife's surname he indignantly denied it and uttered her Christian name. He was now taking great interest in looking at pictures in illustrated papers and was very critical. He was able to remember letters and words which he had been told a few days before, and it was interesting to notice the aid that the fingers of the left hand were to his memory. If he wanted to remember a thing he looked hard at his left fingers, and, as he remarked, he saw it there in a short time, but often after much puzzling. The patient's condition from this time gradually improved. He was able to understand word symbols more readily day by day, and he could read. He would repeat a word again and again after following the outline of each letter, and having been told what the letters spelled. He often employed a circumlocution of more general words instead of the special word he could not revive in his memory, and instead of asking for "a pencil" he would ask for "something to draw with." His great trouble was that he had forgotten so much. His mind-blindness did not improve, and he could not recollect his most intimate friends when they called to see him. Neither could he recognise paintings which he had spent a great deal of time over, but little sketches which had cost him very little time and thought he could recognise as his work. In August he had partially recovered his loss of power, but he had still right hemianopsia, and his motor speech was very indifferent. His friends attempted to get him into the air, after which he seemed very much worse, for the movement upset him considerably. Early in September he had been reading, and was very cheerful before taking his afternoon sleep, but when he awoke he was found to have a dazed look and to have lost all power of the right side. On the following morning I found hearing and sight completely gone. The tongue could not be protruded from the mouth, but deviated to the right. Swallowing was difficult, and there was also loss of sensation and power of the right side. He was completely deaf to words, even when whispered, but he had painfully acute hearing for sounds. There was one marked difference in his condition now from that in his previous attack, which was that he had always been able to make known his various wants by writing with his finger the outlines of the letters upon the sheet, which power he lost in the previous attack, when he was reduced to pantomimic signs. The word-deafness and loss of sight continued for four weeks, but he had right hemianopsia for several months afterwards. While deaf and blind to words, as well as having complete paralysis of motor speech, he expressed a wish to make his will, and made his wishes known by forming the outline of the letters on the sheet of the bed. He also made his lawyer and wife understand that when they meant "yes" they were to tap his hand and when "no" they were to cross it. To satisfy him the will was executed, and with his left hand he very badly wrote his signature. He now gradually recovered from word-blindness and very slowly regained power in his limbs, but the motor part of the aphasic condition was very slow in recovering, for he was unable to speak until the following April, when he commenced and rapidly regained speech, it having been absent since its partial recovery for thirty-two weeks. On getting downstairs he almost at once commenced to strum on the piano, and it was noticed that he had no difficulty in reading music. This test, however, had not been tried when he was word-deaf. At the end of the second year he was able to walk slowly on crutches. His zest for painting returned and he found the greatest pleasure in sketching from nature while he was convalescing. His mind was a complete blank with regard to paintings he had done before his illness. His power of motion steadily returned, and at the end of the third year he could dispense with his bath chair. It was very curious how, in the early period of his convalescence, movement of the body—i.e., to another room—brought on the sensory disturbance of speech for perhaps twenty-four hours. This occurred on three or four occasions. Four years have now elapsed since the attack came on, and I quite recently had a chat with the patient in his studio. He told me that he had tried hard to paint during the past year, but he was so disgusted with his work that he had practically given it up. To my uncritical eye his work looked very passable. He said, however, that his difficulty was in trying to remember how he used to do it, and when he found he was doing the thing wrong he was so dissatisfied with his efforts that he had ceased to make further attempts. He could, however, do pen-and-ink work exceedingly well. On asking him if he remembered painting the pictures about his room he said he did not, but he still thought he saw another man paint one of them. He described himself as being a better judge and more critical than ever he was before, but no workman, and this was not through want of muscular power, for that he had quite recovered. He has been colour-blind ever since he was fifteen years of age his difficulty being to distinguish green from red. On inquiring if this was any worse or was in any way explanatory of his failure he said it was not, but if anything he thought the condition was a little better. He had always had an ambition to become an author and had written considerably; but he told me that he now found this work most difficult, his power of concentration being limited and thought slow. He had a very good vocabulary, however, when talking, and was never at a loss for a word, though there was sometimes an occasional hesitancy in pronunciation. Contrary to Lichtheim's experience, the sensory aphasia in this case of total aphasia cleared up before the motor.

CASE 2.—Another case of sensory and motor aphasia came under my care at the Royal Halifax Infirmary in the month of February, 1896. I had seen this patient five years before in consultation with Mr Steele, of Halifax, when he was suffering from paralysis of the extensors of the left forearm, which had come on quite suddenly. There was no disturbance of speech at this time. He was said to have recovered from this attack. Two and a half years afterwards he had an

epileptiform seizure, and partially lost the use of the right leg and foot, from which he recovered, but he had subsequently at intervals slight fits, one of which ushered in the present condition, and was attended with twitching of the right side of the face. There was a clear history of syphilis made out before, but the condition of the patient now was such that he could give no account of his illness. "I really cannot tell you, I am sure, just now," was his answer to every question put to him, and it was evident he had no comprehension of word language. He read with great difficulty figures and could not read printed matter accurately, but could make out some letters. He could not recognise a bell on the table, but could recognise a watch and a knife. When a water-pipe was pointed at he could not say what it was, but said "hot." Apparently there was no defective eyesight, but an exact perimeter tracing could not be taken on account of the patient's inability to comprehend what was wanted. The motor part of speech was good and there was no paralysis, and his gait was normal, and so were the organic reflexes. He looked in good health and apparently was always in a good humour, readily pleased, but not in any way emotional or childish. On further examining the aphasic condition he seemed to have a more or less complete comprehension of the uses of the objects shown, but could not always give the correct designation. Some things shown he remembered easily and could pronounce their names, others he could not name, but if he thought for a time he sometimes gave the correct name or a similar sounding word, or substituted a round-about phrase as an equivalent. Occasionally when taken suddenly he seemed to answer instinctively and generally correctly. A pencil he knew the use of, but could not name. A pen he called "pea," then pen. A knife and fork and book he knew. A cork he knew, but he called a bottle "brot," and medicine he could only pronounce partially. A key he called "lock," recognising its use. He knew his own name, but occasionally transposed the two parts. In the identification, then, of objects shown he occasionally used the association of ideas. Water pipe he called "hot," and the key "lock," but mispronounced some words. On investigating the visual sense in reading printed or written matter he was found to be much more incorrect. He could read figures accurately, though with some hesitation in some cases. When spelling out, letter by letter, printed words he was very incorrect, and did not always give the same interpretation on two consecutive occasions, while in time he might stumble into a correct reading. When reading and pronouncing words there were similar hesitation and inaccuracy, while there was often an approximation to the sound—e.g., he called London "Luddenden" (the name of a local village), after considerable doubt. His own name he was able to read correctly. On testing his capacity for repeating words there was evidently a degree of inability to recognise certain words and phrases. "What is your name?" he replied to correctly. "How old are you?" he could not understand. Certain words he was deaf to and could not repeat, and through the word-deafness he was unable to comprehend and allowed his mind to dwell on one or two stock phrases, which were always ready, and from which it was difficult to divert his attention. His memory was very defective and he could not say where he lived or the town he lived in; but the word-deafness might account for this. Neither could he say how long he had been ill. On testing his writing from a copy it was found that he made the same errors as in spelling, but did not make the same blunders twice. At times his writing was quite clear, whilst at others it was quite unintelligible. He could write his name, but sometimes transposed it and sometimes left out letters. He could copy figures more accurately than letters. His condition seemed to improve a little, and remained bright and cheerful. He was able to talk and answer simple things correctly, and his memory was a little better. Early in the morning of March 24th he went to the ward lavatory, and was found afterwards in an insensible condition. Apparently he had had a fit, but was quite unable to speak. There was complete paralysis of the right leg, the limb being quite flaccid and paralysed, with rigidity and contracture of the right arm. The eyes and face were unaffected. He could only partially comprehend what was said to him, and could make no response. He gradually recovered power in the leg and arm, and made attempts at speaking, and could utter one or two words—"very nicely," "yes," "getting on," and a few others—and seemed to comprehend more what was said, but his attention was very easily over-tired. On May 8th he had another attack, when he was quite speechless and collapsed. The nurse had observed some twitching of the muscles of the right side of the face when he awoke; he then lost the power of the right arm, but the leg escaped. The condition of paralysis was succeeded by one of rigidity. There was difficulty in swallowing, and the patient was very irritable. He seemed to understand a little more what was said to him in a few days, but recovery was very incomplete, for there was no return of intelligible speech, and there was complete loss of power over the right hand and partial loss of power of the right leg. He became very restless—constantly attempting to get in and out of bed—and was so noisy that we could no longer retain him in the infirmary. His condition is very pitiable at the present time; he cannot understand anything said to him, has complete motor aphasia and right hemiplegia, is very emotional, and presents all the symptoms of cerebral softening.

Although motor speech has been involved in both of these cases as well as sensory, as I have said before, I have brought them forward chiefly on account of them being good examples of sensory disturbance of speech. In Case 1 it is remarkable how compound was the aphasic condition, and it is most probable that there was thrombosis of the Sylvian artery, for all the cerebral centres concerned either in the expression or the interpretation of speech are situated within an area supplied by this vessel. The centre for motor speech (the posterior part of the third frontal convolution and the lower part of the ascending frontal convolution on the left side) was first affected, and the ascending frontal convolution containing also the cortical centres for the movement of the tongue and lips accounts for the early loss of these movements in this case. The part of the brain concerned in the sense of hearing was next affected, which is the posterior half of the first temporo-sphenoidal convolution on the left side. When this region is diseased there is often transient deafness in the opposite ear. The fact observed that he could hear a whisper and understand the word when whispered very softly and slowly is one I find no record of, but points, I think, to over-stimulation of the centre by the ordinary voice, preventing perception of sound characters. The hearing of both ears went simultaneously, but the right, or that on the opposite side of the lesion, was the first to recover. In word-blindness a lesion of the first temporal convolution is found in the majority of cases. The hemianopsia was probably due to involvement of the occipital lobe, for the pupil still continuing to respond to light supports Wernicke's suggestion that the symptom is then due to a lesion in the occipital cortex. The amaurosis which has been present in both attacks is probably cortical also, and is difficult to explain. The optic nerve always looked healthy. Mind or object blindness was part of the visual disturbance. It has been produced artificially by Munk in dogs by extirpating parts of the occipital lobe. Loss of smell, which was associated with the sensory aphasia, is thought by Gowers to be due to softening of the root fibres at the commencement of the fissure of Sylvius. I have not mentioned the fact before, but this patient had visual hallucinations, which Professor Henschen in his work, "The Pathology of the Brain," directs attention to as likely to trouble a patient with homonymous hemianopsia when that symptom is of cortical origin. He said he could always see in the blind half of the field of vision a man at the back of his head holding two lighted candles. Bastian has strongly pointed out that lesions in the posterior parts of the brain are more apt to produce hallucination than lesions in the middle or anterior parts. The amount of sensory disturbance was very remarkable in this case, and might have suggested, at an early period, a purely functional origin, but, as Wyllie says, "the very existence of word-deafness or word-blindness in any case should suggest an organic rather than a functional cause."[2]

In Case 2 there is not much to note except that the sensory aphasia came on first and long before the motor condition; also that there was an absence, as far as could be made out, of any hemianopsia with the word-blindness. The probable cause in this case is thrombosis, which may be proved in a short time, as the patient is now *in extremis*.[3] An important question in connexion with aphasia is its influence on testamentary capacity. In Case 1 the patient, as I have related, made a will and signed it. In concluding

[2] Disorders of Speech, p. 378.

[3] The patient has since died, but no post-mortem examination was allowed.

this paper I have to thank various writers—Broadbent, Gowers, Wyllie, and others—for many suggestions, not forgetting my teacher, Hughlings Jackson, to whom I am indebted for any interest I take in this subject, and Dr. Maxwell, senior house surgeon to the Halifax Infirmary, for assisting in the note-taking of Case 2.

Halifax.

A CASE OF EXCISION OF THE SCAPULA FOR LARGE CYSTIC SARCOMATOUS GROWTH.

By CHARLES A. MORTON, F.R.C.S. Eng.,

SURGEON TO THE BRISTOL GENERAL HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN AND WOMEN; PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, AND OF ANATOMY TO THE ACADEMY OF ARTS.

A WOMAN, aged thirty years, came under my care on Nov. 18th, 1896, with a swelling in the position of the left scapula of four months' duration. There had been rather severe pain in it at times. The swelling was as large as the patient's head, smooth and round, with enlarged cutaneous veins over it. There was a freely fluctuating area, the size of the palm of the hand, in the centre of the swelling. The body of the scapula was buried in the swelling, and what seemed to be the angle was pushed much nearer to the spine than normal. There was a projecting mass of considerable size beneath the teres muscles, and the growth extended into the inner portion of the supra-spinous fossa, round the base of the spine. The acromion process and its junction with the spine and the region of the glenoid fossa seemed free from growth, and movements in the shoulder-joint were quite free. The whole mass of growth with the scapula was movable on the chest-wall beneath. An exploring syringe withdrew clear serous fluid from the fluctuating area in the centre of the swelling. It seemed probable that there was a cyst in a mass of sarcoma growing from the scapula.

I operated on Nov. 25th. Precautions were taken by the administration of brandy and the arrangement of hot bottles about the patient, before the operation began, to guard as far as possible against severe shock. An exploratory incision was then made into the cyst, and it was found to be part of an enormous sarcomatous growth. Excision of the scapula was therefore proceeded with. The exploratory incision was continued upwards and downwards along the vertebral edge of the mass for eight inches, and outwards over the spine and acromion as far as the acromio-clavicular joint, and the flaps turned up and down. I then divided the levator anguli scapulæ and rhomboids and found that the vertebral border and angle of the scapula had disappeared in the mass of growth. The attachments of the deltoid and trapezius to the spine were next divided; I then found the growth extended for an inch above the upper border of the bone, but it was at this point well encapsuled. In separating the mass here, I was not able to recognise the supra-scapular artery, nor did a vessel of any size bleed. The supra- and infra-spinatus muscles did not appear to be infiltrated as they approached the shoulder joint. I therefore cut them through about an inch from the joint, and found the section healthy in appearance, and as the growth did not in any way encroach on the glenoid cavity I proceeded to saw through the spine at its junction with the acromion, and then through what has been called the "surgical" neck of the scapula—through the depression between the supra-scapular notch and the axillary border just where the triceps is attached. This section completely detached the head with the glenoid fossa, and the shoulder-joint was not opened. The coracoid process was left attached to the head. This division of the bone brought the subscapularis into view and I divided it. The body of the bone with the mass of growth was now only attached by the teres muscles and the serratus magnus, which were finally divided. The subscapular artery was clamped before division. An enormous number of small bleeding points were tied, and often between one and two dozen forceps were on the vessels at one time, but the patient lost very little blood considering the extent of the operation. She looked pale at the conclusion of the operation, and two drachms of brandy were given hypodermically, but she did not suffer severely from shock. The pulse was then only 106. Digital pressure was made on the subclavian artery in the posterior triangle before I began to divide the parts in the neighbourhood of the subscapular artery. Although the most scrupulous care was taken with every antiseptic detail the wound suppurated. This was almost certainly due to auto-infection, as she had a sinus leading to bare bone in the other arm; but during the healing, which was protracted, she gained flesh. There is now (July, 1897) no sign of any recurrence. The head of the bone can be rotated freely in the glenoid fossa. All movements of the forearm and hand are normal; the biceps and triceps act well. She can raise the arm a little more than to half a right angle, but only to half a right angle by means of the deltoid; beyond this the trapezius draws up the outer end of the clavicle, and with it the arm. There is no power of external rotation in the shoulder-joint. The acromion process became tilted, so that the upper surface no longer looked upward, but only backwards. The arm is a very useful one.

The mass of growth, on examination after removal, in some parts presented the appearance somewhat of fat, but was more gelatinous, and in others was white and firm. In the centre it was infiltrated with serum, and broken down into the cystic cavity which was tapped with the exploring syringe. Communicating with this cyst was a larger one, also formed by degeneration of the tumour tissue. The growth had destroyed the body of the scapula to a very large extent only portions of the bone were found as small thin plates scattered through it. The angle and vertebral border had quite disappeared. The subscapularis, and the infra-spinatus and supraspinatus muscles, except towards their insertions, were replaced by growth which was only covered by the thickened and infiltrated supra- and infra-spinatus fasciæ and the layer of fascia over the subscapularis. The origins of the teres major and minor were extensively infiltrated. Microscopic sections show a tissue composed of small round cells with large areas of degeneration, in which all structure is lost, and here and there amongst the round cells a few imperfect giant cells.

That it is unnecessary to remove the whole bone for even periosteal sarcoma seems now generally agreed upon by surgeons, provided that the section of the bone is made well away from the growth, for if this is done recurrence in the lungs is more likely than recurrence in the portion of bone which is left. I operated on this principle in this case, dividing the bone and muscles everywhere thoroughly beyond the limits of the growth, but not removing the whole bone. It would have taken longer to disarticulate at the shoulder and acromio-clavicular joints and dissect out the coracoid process, and, moreover, the retention of the head and glenoid cavity with the coracoid must add considerably to the utility of the limb. One objection that has been raised to leaving part of the scapula—that the cut arteries tend to retract behind the portions of bone left and are more difficult to secure—cannot, I think, be entertained—at any rate, when only the head and coracoid process are left.

Clifton, Bristol.

SOME UNUSUAL CASES.

By HENRY LEE, F.R.C.S. Eng.,

CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

CASE 1.—Some years ago, whilst on a visit at West Ilsley, where there was no resident medical man, I was asked to see a boy, who, with others, had been trying a chaff-cutting machine. By some means or other he got his arm in front of the blades whilst the machine was in action. Immediately below the left armpit there was a gaping wound down to the bone. In this the open mouth of the lower extremity of the divided axillary artery could be plainly seen. The boy was faint and frightened, and there was no bleeding then to signify. Having a pocket-case with me the artery was tied and the wound closed. In this case the nerves were doubtless divided. The power of moving the arm had permanently gone.

CASE 2.—A patient who had worn a bivalved tracheotomy tube for a long time presented himself at St. George's Hospital. The shield of the tube had become detached, and the two valves had fallen into the trachea. These were removed separately by a curved pair of forceps.

CASE 3.—Soon after the introduction of the fourpenny-

pieces a boy playing with one got it into his trachea. He was placed face downwards over a counter. One person held his heels and two others lowered his head. He soon became blue in the face and had to be restored to the upright position. This experiment was tried a number of times and always with the same result. After some delay this patient went to St. Thomas's Hospital, where one day he went suddenly to the watercloset and was sick. A metallic chink on the pan of the watercloset was heard and there were no further symptoms. The fourpenny-piece was not recovered.

CASE 4.—In Mr. Brunel's case, as is well known, he constructed a revolving apparatus, by means of which he could, when attached to it, be inverted without any physical exertion. The result was the same as in the last-mentioned case. The spasm of the glottis necessitated the return to the erect position. This was often tried, but ultimately with no better result than my "counter" arrangement. At length Sir B. Brodie opened the trachea and Mr. Brunel was placed on his revolving apparatus, and the half-sovereign, which had passed into the trachea, came out of his mouth. I have some reason to know that there was a general impression that the half-sovereign came out of the opening which Sir B. Brodie had made. The explanation, I believe to be this: When Mr. Brunel was inverted, the coin, as at other times, produced a spasm of the glottis, and prevented any air entering the lungs by the natural channel, but the patient was able to breathe through the artificial opening until the spasm relaxed. At all events Mr. Charles Hawkins, who assisted Sir B. Brodie, told me that he received the coin in his hand from Mr. Brunel's mouth. After a time it was found that Mr. Brunel had albuminous urine, and it was supposed that this indicated disease of the kidneys. A consultation was held at Sir B. Brodie's house. There were present Sir B. Brodie, Dr. Owen Rees, Dr. Seth Thompson, and myself. The general opinion was that Mr. Brunel ought to go to Egypt. I ventured, however, to remind Sir B. Brodie that when I was his clinical clerk at St. George's Hospital we had notes of cases in which there was albuminous urine and where there was no disease of the kidneys. Mr. Brunel went to Egypt, accompanied by Dr. Seth Watson, a personal friend of my own, and for some time physician to the Oxford Infirmary, who, as I had subsequently reason to believe, did not pay much attention to the condition of the urine. Mr. Brunel returned in sufficiently good health to undertake the building of the *Great Eastern* steamship, which he accomplished without difficulty. After the lapse of some months he became insensible to external impressions and lost the power of speech. Sir B. Brodie subsequently remarked that he had never known a case in which the power of speech was entirely gone that had recovered. After death the kidneys, upon section, showed no visible signs of disease. There was about half-way down an intussusception in the right ureter, evidently of long standing. The invaginated portion had assumed the appearance of a small tumour constricted at its base. It was as red as the ripest cherry. This left no doubt in my mind as to the origin of the albumin which had so frequently been found in the urine. The convolutions of the brain appeared compressed, but there was no effusion of blood or serum. The rings of the trachea, which had been divided, were found united by cartilage.

Queensborough-terrace, W.

A CASE OF ATROPHIC CIRRHOSIS WITH ASCITES FOLLOWED BY A LARGE CYST OF THE LIVER; WITH SOME REMARKS ON THE QUESTION OF DIAGNOSIS.

BY W. C. DEVEREUX, M.A., M.B. CANTAB.,
SURGEON TO THE TEWKESBURY HOSPITAL.

AT the beginning of March, 1896, I was consulted by a woman, aged forty-four years, who had been ailing for about a month, complaining chiefly of great progressive weakness, sickness, anorexia, diarrhœa, and a great increase in the size of her abdomen. She had previously been a perfectly healthy woman, moderately stout, but had lately been losing flesh. Catamenia had been regular until the commencement of her illness, when they ceased altogether. The diarrhœa occurred from four to eight times a day, the stools being semi-fluid, very offensive, and grey or white in colour. The urine was scanty (sometimes not more than four ounces in the twenty-four hours even when there was no diarrhœa), acid, thick and highly coloured, with abundant urates and a trace of albumin. The tongue was thickly coated, and there was slight jaundice. The heart sounds were weak and there was a soft mitral systolic murmur. The pulse was very feeble and rapid (110). Both lungs were slightly œdematous at their bases. The abdomen was enormously distended with ascites, which prevented an accurate marking out of the liver, which was apparently much contracted. There was the usual etiology of atrophic cirrhosis. On consultation with Dr. Hayward, of Haydock, the case was diagnosed as one of atrophic cirrhosis of the liver. We decided not to tap for the present unless there was any increase in the œdema of the lungs. The patient was put on a liquid diet with no stimulants. She was given one-twelfth of a grain of subchloride of mercury and one grain of powdered boracic acid three times a day, and a mixture containing eight minims of tincture of digitalis, three grains of iodide of potassium, and compound infusion of gentian to one ounce three times a day. On March 19th, as the patient was making no progress (except a slight decrease in the diarrhœa) and the œdema of the lungs had increased, I resolved to draw off the ascitic fluid. This was done by means of a Southey's tube and seventeen pints were drawn off. The liver could now be accurately defined, and the superficial dulness was found to extend on the right side from the seventh to the eighth rib in the mid-sternal line in front and from the tenth to the eleventh rib behind. No dulness could be detected either in front or behind on the left side. The beneficial effect of the tapping was marked on the very next day, when as much as two pints of clear urine, free from albumin, were passed, and three days later bile reappeared in the motions, which were more formed and passed only once or twice in the twenty-four hours. The pulse improved (80) and the mitral systolic murmur and the œdema of the lungs disappeared. There was no sickness and the appetite improved. The increase in strength was remarkable, and in a fortnight the patient was able to sit up in a chair. On April 3rd the patient began to complain of a great deal of flatulence and there was some slight diarrhœa. As the pulse was not so good the mixture was changed to five grains of tincture of strophanthus, three grains of iodide of sodium, ten grains of bismuth salicylate, ten grains of benzo-naphthol, and fifteen minims of compound tincture of cardamom, which checked all the symptoms. About April 15th the patient had not been so well for three or four days, and complained of a feeling of fulness in the left side and a catching pain when she took a deep breath. On examination I found that the liver dulness on the left side extended from the seventh rib to two inches below the costal margin in the mid-sternal line, where the thickened edge of the liver could be felt. There was no increased dulness behind or on the right side. By the 22nd the dulness had extended down to the level of the umbilicus, and there was a large protuberance of about four inches in diameter, over which there was distinct fluctuation, the lowest point of fluctuation being about two and a half inches above the thickened edge of the liver. I withdrew a small quantity of fluid with an exploring needle, and obtained a brown semi-transparent fluid, highly albuminous (one-third), and containing chlorides, liver cells, abundant leucocytes, fat globules, acicular crystals (? tyrosin), and granular débris. There were no hooklets or cancer cells. On May 1st the dulness had extended on the left side into the pelvis and above to the second rib in front and to the upper border of the scapula behind. There were no breath sounds except at the apex. On the right side the dulness extended in front from the sixth rib to two inches below the costal margin, and from the eighth rib to the costal margin behind, and all over the right lung the breath sounds and resonance were normal. During the short time from the first symptoms of pain and fulness (April 15th) the increase in the weakness and emaciation was extremely rapid, so that the patient was little more than skin and bone. The pulse was very feeble (130) and at times scarcely perceptible. The symptoms, in spite of the negative character of microscopical examination of the fluid, seemed to point to malignant disease, probably sarcoma. The state of prostration was such that when Dr. Hayward again saw the patient with me on May 2nd there did not seem

the faintest hope of her rallying again. We came to the conclusion that it would not be advisable to attempt aspiration, both on account of the extremely critical condition of the patient and the fear of hæmorrhage into the cyst. About a fortnight later the patient rallied slightly, and the enlargement showed no further signs of increasing. There had been occasional slight shivering fits, with the temperature running up to 101° F. On June 11th I inserted a Southey's tube into the area of fluctuation and withdrew three and a half pints of fluid. This was examined by Dr. Hayward, Dr. Robertson (medical officer of health of St. Helens), the Clinical Research Association, and myself. It was a dark brown, semi-transparent fluid, of specific gravity 1015, containing a large quantity of albumin (one-third), chlorides, no sugar, and was faintly alkaline. On microscopical examination there were pretty perfect nucleated liver cells, numerous fat globules, leucocytes in progress of disintegration, acicular crystals, and masses of bile-stained tissue. There were no cancer-cells, hooklets, or fragments of hydatid membrane. There was considerable improvement after the removal of the fluid, and the patient's strength increased. The emaciation, however, continued much the same in spite of the enormous appetite the patient developed. The temperature still ran up towards evening to 100° or 101°, and was unaffected by quinine. The morning temperature was normal. The stools were occasionally white, but always got back their proper colour on the administration of small doses of calomel. The liver dulness three days after tapping extended on the left side in front from the fourth rib to the costal margin and behind from the angle of the scapula to the costal margin. On the right side it extended from the sixth rib to the costal margin in front. The patient was able to be out of bed again by July 24th, though the liver had again begun to enlarge. By Aug. 12th the liver had again attained its former large dimensions, so I repeated the tapping, again drawing off three and a half pints of fluid. The fluid differed somewhat from that on the first tapping, being of a dirty white colour and non-transparent, and containing more pus cells, but no liver cells or bile-stained tissue, and was of specific gravity 1015. The report of the Clinical Research Association was as follows: "We could find no evidence whatever in this fluid of malignant growth or hydatid disease. It was of exceptional nature chemically, containing neither bile pigments nor bile salts, but somewhat abundant fats and crystals of fatty acids. No cholesterin could be found. The suspended matters were, in fact, composed of broken-down pus cells and fats." The next day the growth had receded to within an inch from the costal margin, and in a week had decreased by another inch, the upper limit of dulness remaining during this time at the level of the left fourth rib in front. The improvement now continued without interruption, the patient putting on flesh and gaining strength, so that on Sept. 20th she was able to go out in a bath chair. The liver dulness also gradually diminished. On Sept. 28th the patient began taking petroleum emulsion and to have massage. The patient was weighed for the first time on Oct. 26th, having probably gained between two and three stones since May. Her weight was then seven and a half stones. She is now very nearly as well as ever, and weighs over nine and a half stones. Catamenia began again at the end of February, having ceased for a year. The liver dulness extends on the right side from the sixth rib to the costal margin in front and from the ninth rib to the costal margin behind. On the left side it extends from the fourth to the seventh rib in front and from the seventh rib to the costal margin behind.

Remarks.—This case is one of considerable interest and, it must be confessed, of some obscurity. I propose to consider the question of diagnosis as it presented itself at three different stages or periods of the case: (1) at the beginning of March, 1896; (2) at the beginning of May, 1896; and (3) at the present time. I. When seen in March the case appeared to be an ordinary one of atrophic cirrhosis with ascites. The usual etiology and the physical signs and symptoms all pointed to this conclusion. The impression given before tapping as to the small size of the liver was confirmed by the examination made immediately afterwards. Very marked improvement instantly followed the tapping, and there has been no re-accumulation of fluid since in the general peritoneal cavity. A certain amount of doubt must arise as to whether the ascites was due to the cirrhosis or to some other cause. Murchison states that when once ascites due to cirrhosis appears it persists and gradually increases. Hale White[1] has shown that when ascites in cirrhosis requires tapping the end is not far off, and this is borne out by Rolleston in his article in the *Midland Medical Review*, 1896. On the other hand, Cheadle[2] and Foxwell[3] maintain that the condition is curable, and give several cases in support of this view. Without affecting the correctness of the diagnosis there is the possibility that the ascites was not due to the cirrhosis found to exist in the liver, but independent of it. In this case it might be due either (1) to some pressure on the portal vein; or (2) to some local inflammation, causing chronic peritonitis with effusion. II. At the beginning of May, 1896, after about a month of apparent progress towards recovery, the clinical aspect of the case changed. The physical signs of enlargement of the left lobe of the liver appeared. The area of liver dulness increased very rapidly, its progress being observed from day to day, until in about four weeks there was extreme enlargement of the organ generally, its lower edge being distinctly palpable projecting well below the costal cartilages in the right mammary line and extending downwards and to the left in the left inguinal region. Above the thickened edge of the liver there were very distinct signs of fluctuation obtained in the epigastric and upper umbilical regions. The evidence given by palpation and percussion gave the impression of there being enlargement of the liver generally, with a very large cyst in the left lobe projecting upwards and downwards as well as forwards. Associated with the rapid enlargement of the liver there had been equally marked loss of flesh and strength. Pain was not a marked symptom and jaundice was absent. The lower edge of the liver and its surface were felt to be hard and smooth. At the time of our consultation on May 2nd there was no doubt in the minds of either Dr. Hayward or myself that we had to do with a case of rapid enlargement of the liver with the formation of a large cyst in the left lobe. The possible causes presenting themselves to our minds were: (*a*) abscess, (*b*) hydatid, and (*c*) malignant abscess (carcinoma or sarcoma). (*a*) As regards tropical abscess: (1) there was an absence of the usual etiology—viz., residence abroad or dysentery; (2) the characters of the fluid obtained by the exploring needle were not those of abscess; and (3) the general symptoms also combined to negative this hypothesis. Abscesses of the liver are sometimes caused by a gastric ulcer becoming adherent to the under surface of the liver and eroding that organ or a foreign body perforating the gut and entering the liver. These theories were, however, equally untenable for the same reasons as tropical abscess, together with the entire absence of any previous history which could give support to such a supposition. (*b*) Hydatid was excluded by (1) the very rapid enlargement of the cyst under daily observation, and (2) by the characters of the fluid, this containing a large quantity of albumin (one-third) and chlorides, and being without any signs of hooklets or the characteristic membrane. Frerichs[5] records a case of sterile echinococcus presenting symptoms analogous to this case, but even here the characters of the fluid were quite different. (*c*) The previous suppositions having been negatived, there appeared only the remaining one of malignant disease. The considerations bearing on this possibility appeared to be: (1) although the patient looked very ill and greatly emaciated there was no cancerous cachexia; (2) the examination of the fluid gave negative results as far as the finding of any characteristic cellular elements was concerned; (3) nodulation of the liver surface and jaundice were absent; (4) still the positive facts of rapid enlargement of the liver substance associated with marked emaciation and prostration gave ground for strongly suspecting malignant disease; and (5) formation of cysts, sometimes of a large size, is not unknown in malignant disease of a sarcomatous nature, and therefore sarcoma was considered more probable than carcinoma. This diagnosis at the time seemed so highly probable that an almost hopeless prognosis was given. III. The happy event of the patient's apparent recovery gives occasion for reconsidering the diagnosis in the light of the subsequent history and present condition of the patient, as well as that gained by further reference to medical literature,

[1] Guy's Hospital Reports, 1892.
[2] Brit. Med. Jour., Nov. 19th, 1892.
[3] Midland Medical Review, 1896.
[4] Brit. Med. Jour., June 13th, 1896, p. 1443.
[5] Diseases of the Liver, vol. ii., p. 267.
[6] Brit. Med. Jour., June 13th, 1896, p. 1447.

to which may be added suggestions made by several distinguished physicians who have been good enough to take some interest in the case. 1. The retrocession of the liver tumour, together with the continuous gain in flesh and strength which have followed the last tapping of the cyst, seem to almost certainly negative the idea of malignant disease, although the natural cure of such disease is not wholly unknown.[7] 2. The same considerations which in the earlier stage of diagnosis sufficed to negative abscess and hydatid are still equally applicable. 3. Simple cysts of the liver are but rare, and three varieties of them are recognised by pathologists. (*a*) Small serous cysts, with clear watery contents, varying in size from a pea to a bean, are occasionally found in the liver, and are often accompanied by similar disease of the kidneys. They are multiple, and are supposed to originate in alteration of the hepatic cells. Their inner wall is covered with pavement epithelium, and presents membranous projections such as result when small cysts unite to form larger ones. No connexion can be made out between them and the bile-ducts.[8] (*b*) Kiener and Kilsch state that biliary polyadenomata found occasionally on section in cirrhotic livers may suppurate and form abscess cysts. These are, however, found in large cirrhotic livers.[9] (*c*) Occasionally a single cyst, containing inspissated mucus, has been found, and is generally considered to be due to partial obliteration of one of the bile-ducts, which has been subsequently shut off from the rest of the duct.[10] A specimen shown by Dr. Sharkey at the Pathological Society in 1882[11] presented a very unusually large cyst, but even this contained less than a pint of fluid. In this case there is unfortunately no record of the symptoms, as the patient was admitted to the hospital suffering from a fracture of the skull and died on the following day. 4. A case of pancreatic cyst reported from St. George's Hospital[12] presents some striking resemblances to my case, especially in the characters of the cyst fluid, of which a much more elaborate examination was made. As against the diagnosis of pancreatic cyst, however, the following considerations present themselves: (*a*) the cyst approached the surface of the abdomen above the edge of the liver and not below it; (*b*) the fluid was found by three observers to contain liver cells and what appeared to be bile-stained tissue; and (*c*) the liver, though considerably smaller than it was, is still enlarged. There remains the supposition that a cyst primarily of the pancreas may have secondarily involved the liver substance by continuity and that the liver cyst was therefore secondary. If such a condition has ever been observed post mortem, this would appear to be a possible diagnosis in this case. If, however, such a condition has not been observed one would think from theoretical considerations that a very rapidly growing cyst of the pancreas would be more likely to displace the liver upwards rather than to erode it, especially when one knows how extremely slowly an aneurysm erodes the neighbouring organs. 5. Another suggestion that has been made is that the case may have been one of accumulation of fluid in the lesser cavity of the peritoneum due to the blocking of the foramen of Winslow. Had we had to do with a case of cystic enlargement approaching the surface of the abdomen below the edge of the liver, and apparently in connexion with it, this, too, would have been a possible diagnosis; but the same facts which have been alluded to above as negativing pancreatic cyst are also of weight against this hypothesis, for the character of the fluid and the physical signs of the cyst seemed undoubtedly to point to its being in the liver substance. Jordan Lloyd has shown[13] by experimental injection of the lesser peritoneal cavity that the dulness reaches only just down below the umbilicus, whereas in this case it extended well down into the left iliac fossa. In addition to these objections there was the absence of the stomach note, which is usually present as a narrow resonant line separating the cyst from the liver. 6. These reasons, together with the absence of blood from the fluid and the absence of the history of any injury, serve also to exclude peritoneal sanguineous cysts like those described by Theodore Fisher.[14] 7. Knowsley Thornton[15] records a case in which he removed the spleen containing thirty ounces of blood-stained fluid. Such a cyst might possibly set up inflammation, and thus cause in the first instance peritoneal effusion. The fluid which I drew off contained no sign of blood on examination both microscopically or chemically, and the present symptoms of occasional appearance of white stools and continued hepatic enlargement point to liver rather than to spleen. 8. The same objections, together with the position of the cyst relative to the edge of the liver, would negative a hæmorrhagic adenoma of the left supra-renal body such as described by Létulle.[16] 9. An empyema perforating the diaphragm and setting up a subphrenic abscess would be contra-indicated by the total absence of symptoms pointing to such a condition and the characters of the fluid.

Assuming that error in observation and defective memory of impressions received can be eliminated, which, however, as we all too well know, are not wholly impossible, it would appear that the condition which I believe to exist in the final stage is the most probable one, viz., "a simple cyst of the liver, with a fibrous capsule and lined with granulation tissue," however rare and unusual such a condition may be. As to the cause and nature of the first origin of the cyst, some obscurity cannot but exist and the diagnosis must to a large extent remain doubtful, the art of diagnosis so largely consisting in recognising in a case before one a likeness to some case or cases previously seen, and failing this doubt must exist. Lastly, with regard to the question of treatment, that adopted in the first stage needs no comment. In the second stage the large and rapidly increasing size of the cyst so considerably pressing from below on the left pleural cavity seemed to demand some attempt to relieve the pressure. In the then apparent probability of the existence of malignant disease it was not considered advisable to use the aspirator for fear of internal hæmorrhage into the cyst cavity. The same consideration as well as the extremely weak condition of the patient contra-indicated at the time any attempt of a serious operation to explore and at the same time to deal radically with the cyst by drainage. The treatment adopted, when the patient's condition had somewhat improved, by slowly draining the cyst with a Southey's capillary cannula, whatever theoretical objections may be raised to it, in this case appears to have been attended with success. Under more radical treatment the patient might easily have done worse and could hardly have done better.

Tewkesbury.

[7] THE LANCET, Dec. 5th, 1896, p. 1604, and May 1st, 1897, p. 1208.
[8] Frerichs: Diseases of the Liver, vol. ii., p. 224.
[9] Hamilton's Pathology, vol. ii., part i., p. 223.
[10] Friedreich, Archiv für Pathologische Anatomie, Band xi., S. 166.
[11] Transactions of the Pathological Society, vol. xxxiii.
[12] THE LANCET, July 4th, 1896.
[13] Brit. Med. Jour., Nov. 12th, 1892.
[14] Guy's Hospital Reports, 1892.
[15] Transactions of the Pathological Society, vol. xxxv., p. 385.

A CASE OF ISCHIO-RECTAL HERNIA DUE TO DISLOCATION OF A SUB-PERITONEAL FIBROMA.

BY J. LYNN THOMAS, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE CARDIFF INFIRMARY.

A MAN, aged sixty-two years, was sent to me by Mr. C. W. Hemming, who has very kindly supplied me with a full history of the case, and has also taken a keen interest in it for some years. About four years ago, whilst lifting a heavy weight, the patient felt a strain in the anal region, and the next day he noticed a rupture, which he pushed back, but it came down again immediately. The rupture increased in size until a year ago and since then has remained stationary. The swelling was increased by walking, was a source of trouble in defecating, compelled the patient to sit on the opposite tuber ischii, and for the last two years had incapacitated him for work on account of its size when he exerted himself. He had had no bladder trouble. The patient had always enjoyed good health, but was said to have dislocated his right hip ten years previously. The accompanying illustration shows the size and situation of the hernial protuberance and also the displacement of the right buttock-fold towards the left. The swelling extended anteriorly to the posterior extremity of the scrotum. The posterior portion of the tumour was reducible and contained intestine; the greater portion was irreducible, firm, elastic, slightly nodulated into three portions, and dull on percussion. With the finger in the rectum, the gurgling intestine could be felt descending into the hernia in immediate contact with the rectal wall on its right side, and occupying the ischio-rectal space from the

[16] Archiv de Science Médicale, 1896, p. 80.

coccyx to the right tuber ischii, whilst nothing could be felt in front and behind its walls. On coughing impulse was conveyed to the whole tumour. Before operation I took the irreducible portion to be an epiplocele. The nodule near the lower border of the swelling was a molluscum fibrosum growing from the right thigh.

Operation.—On April 16th, 1897, with the patient in the lithotomy position, the skin thoroughly cleansed, and the rectum irrigated and plugged with an iodoform sponge, I made a long antero-posterior incision over the outer aspect of the swelling to avoid the gluteal fold. Several layers of thickened fascia with intervening cyst-spaces (bursal) were cut through, and many enlarged veins coursed over the surface of the tumour. A flattened muscular band about an inch and a half in width crossed over the tumour from the side of the rectum towards the inner aspect (rather deeply) of the tuber ischii, causing one of the boundaries of the nodulations previously described and firmly fixing the growth in its bed. There was a bursa between the muscle fibres, and it required some persuasion to convince one that it was not intestine before it was divided; as soon as this was done the tumour was easily shelled out without opening the peritoneum immediately under it. A large piece of redundant skin and fat was removed, the wound was closed, a drain was put in for forty-eight hours and an iodoform gauze dressing was applied and fixed by collodion after Professor Kocher's fashion, in his after-treatment of radical cure of hernia. The wound healed up quickly. The tumour weighed two and a quarter pounds; it cut like a moderately tough

The tumour as seen from behind.

fibroma. Microscopically it proved to be a fibroma undergoing myomatous degeneration. Before the patient returned home there was very little fulness in the ischio-rectal space; it bulged on coughing, and two fingers could be pushed into it, the coccyx, great sacro-sciatic ligament, and tuber ischii being thus easily felt. The patient sat and defecated with comfort.

Remarks.—Ischio-rectal hernia are very rare in men, Macready, in his valuable "Treatise on Ruptures," having collected only six. This case I believe to be unique, inasmuch as the enterocele was primarily due to the dislocation of the sub peritoneal fibroma through the ischio-rectal fossa. I have given the particulars fairly fully on account of the many points of interest in the case. The muscular band crossing the tumour I concluded to be a portion of the levator ani, because it was not directly attached to the tuber ischii and was too near the rectum to be the transversus perinæi. In Mr. William Anderson's notable contribution to the "Surgery of the Sub-peritoneal Tissue" it is stated that "the fibromata merge on the one hand into the lipomata; on the other into the myomata; and it is probable that many of the older reports of fibrous tumours really refer to myomata. Purely fibrous growths may, however, develop in the sub-peritoneal tissue"[1]; and in speaking of fibro-lipomata he states that "they sometimes comprise a considerable proportion of fibrous tissue, and, like the retro-peritoneal tumours, may undergo myxomatous degeneration." No trace of fat could be found in this tumour. This is the second case during the last few months that has impressed upon me the importance of Mr. Anderson's plea for treating the sub-peritoneal tissue as an anatomical entity liable to diseases of its own. The other case was one in which Dr. A. E. Taylor asked me to do a radical cure for a femoral hernia that was partly reducible, but returned immediately. I did so, fully agreeing that there was an epiplocele, but it turned out to be a serous cyst with a pedicle running up the femoral canal, and by pressing above Poupart's ligament two other cysts were delivered through the saphenous opening, and in dragging down the last one a cone of peritoneum was removed. I need hardly add that the "radical cure" was satisfactory.

My thanks are due to Dr. Wallace for his assistance at the operation, which was a very tedious one, and to Dr. F. P. S. Cresswell and Dr. Wood for sections of the tumour.

Cardiff.

[1] Brit. Med. Jour., Oct. 17th, 1896.

NOTE ON A CASE OF GLIOMA OF THE RETINA.[1]

BY CHARLES BELL TAYLOR, M.D., F.R.C.S. EDIN.,
SURGEON TO THE EYE INFIRMARY, NOTTINGHAM.

THE patient to whose case I wish to call attention was a sturdy little fellow full of life and vigour, and, although very blind, was still able to stumble about, avoiding large objects. The parents were under the impression that the white shimmer perceptible within the child's pupils—for, strange to say, both eyes were alike affected—was caused by cataract; but a glance was sufficient to convince me that such was not the case, and I was able, by dilating the pupils and concentrating the rays of light, to demonstrate that not only was the lens in each eye perfectly transparent, but that its natural brilliance was greatly enhanced by a yellowish background of abnormal growth with bossy surface, traversed by tortuous blood-vessels.

The growth could not be a simple non-malignant tumour, for such a thing was never heard of in this situation. It could not be sarcoma, because sarcoma is a disease of more advanced life, and is never bilateral. It could not arise from

FIG. 1.

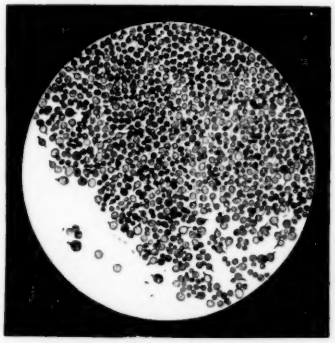
View of patient previously to operation.

suppurative choroiditis or deposit of purulent matter in the vitreous chamber (pseudo-glioma as it is called), because such a condition is always preceded by accident or serious illness, and is accompanied by iritic changes and softening of the globe. What, then, was it? There can be only one answer to that question. It was medullary cancer or glioma of the retina, a disease which is certain to end fatally if untreated, which is apt to recur in the orbit after excision of the eyeball, and in a large proportion of cases to reappear in the sound eye, even years after the ablation of its fellow. Above is an illustration (see Fig. 1) of a patient under my care whose right

[1] This note was read, and the patient was exhibited, at the meeting of the Nottingham Medico-Chirurgical Society on Feb. 3rd, 1897.

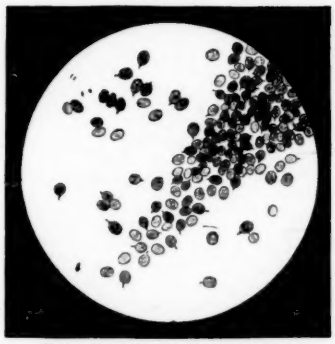
eye I excised on account of glioma with perfect success in her third year, and who succumbed to a recurrence of the disease in the left eye (which was not excised) in her sixth year. This is a black record for glioma, but we must not allow it to blind us to the facts that the subjects of glioma are for the most part children who show no sign of constitutional cachexia; that the disease never appears later in distant organs, such as the liver, for instance, by metastasis, as sarcoma does; that it never recurs either *in loco* or in the sound eye after three years of post-operative immunity; that it has never been seen in children over eleven years of age; and that its histological elements, simple round nucleated cells (never spindle cells), are not to be distinguished, as Mr. Treacher Collins has pointed out, from the normal cells of the

FIG. 2.



Glioma cells.

FIG. 3.



Cells of fœtal retina (after Collins).

fœtal retina. In short, the disease, although so serious in character is, in my opinion, in the first instance a purely local affection, which spreads only by continuity of tissue,[2] and I believe as a result of great experience that if the eye is excised while the growth is confined to the retina there will be no recurrence in the optic nerve or orbit of the affected eye, and that if the same operation is performed in good time upon the second eye should it become affected a like result may be attained.

It is clear, therefore, that the only course to pursue in the present case is to recommend extirpation of both eyes—a grim alternative, which the parents naturally regard with dismay. Nevertheless, it is our only resource and the least of evils, for if nothing is done, humanly speaking, the disease will spread backwards and forwards, the eyeballs will slowly distend until they give way and protrude from the orbits, and bleeding masses of fungus, offensive and ulcerated, will appear upon the surface, and will prove fatal to the patient and heart-rending to those who, compelled to watch over their child's slow dissolution, will reproach themselves that they refused the only chance of cure, when cure alone was possible.

Nottingham.

[2] In cases where the disease has re-appeared in the sound eye the optic nerve has been found to be quite healthy, thus proving that the growth was quite independent and had not spread, as some have supposed, through the optic tract from one eye to the other.

A NOTE ON RUPTURE OF INTRA-THORACIC AORTIC ANEURYSMS BASED UPON AN ANALYSIS OF THIRTY-TWO CASES.

BY T. N. KELYNACK, M.D. VICT., M.R.C.P. LOND.,
PATHOLOGIST TO THE MANCHESTER ROYAL INFIRMARY; DEMONSTRATOR AND ASSISTANT LECTURER IN PATHOLOGY TO THE OWENS COLLEGE.

THE occurrence of rupture of an intra-thoracic aortic aneurysm is an event which not only raises questions of clinical importance, but points of much pathological and medico-legal interest. I therefore venture to think that some brief reference to cases which have been met with in the Pathological Department of the Manchester Royal Infirmary may not be without some value.[1]

Number and proportion of cases.—Among the last 4593 cases submitted to pathological examination rupture of a thoracic aneurysm has been noted in 32 cases. This gives a percentage in all "general" cases of 0·69.

Sex.—Of the 32 cases 30 were men and only 2 women—that is, a percentage of 93·75 males and 6·25 females.

Age.—The exact age was obtained in 30 of the cases; the others were middle-aged males. The average age was forty years. The males averaged 40·4 years. The females averaged thirty-four years. The youngest subject was aged twenty years and the oldest was aged sixty-five years.

Seat of aneurysm.—In many instances the greater part of the arch was involved. Grouped, however, according to the chief area of affection they may be arranged as follows: Ascending portion of arch, 12; transverse portion of arch, 11; descending portion of arch, 4; and descending thoracic aorta, 5.

Point of rupture.—This can be best indicated in tabular form:—

Part ruptured into.	No. of cases.	Percentage.
Pericardium	13	40·62
Pleura (left)	7*	21·37
Œsophagus	3	9·37
Externally	3	9·37
Trachea	2	6·25
Pleura (right)	1	3·12
Lung (left)	1	3·12
Bronchus (right)	1	3·12
Superior vena cava	1	3·12

* One of these was a case of dissecting aneurysm.

Nature of death.—Of the thirty-two cases, six were observed in medico-legal investigations, the subjects being brought dead to the hospital, having been found dead or suddenly seized in the street or elsewhere. In one instance a man while riding in a cart suddenly fell out of the vehicle and was picked up dead. In nearly all the cases where rupture occurred while in hospital or where a clear history could be obtained death was sudden, in many instances being practically instantaneous. In one case where rupture occurred into the œsophagus death took place in five minutes. In another, where the aneurysm burst into the pericardium, the patient felt faint and was dead in three minutes. In one subject, where the pericardium was found filled with blood, and where there was commencing erosion into the trachea, with also extension into the left lung, a small quantity of frothy blood was brought up for some hours before death, which was sudden. In a case where there was general aneurysmal dilatation of the arch of the aorta rupture took place into the pericardium through a vertical slit two and a third inches in length. The patient was brought to the hospital in what appeared to be a syncopal attack and died suddenly four hours later. In one case where death occurred suddenly blood-clot weighing eighty-five ounces was found in the left pleural cavity.

Manchester.

[1] These cases are strictly limited to aneurysm of the thoracic aorta. Aneurysms of the innominate and subclavian are not included. The question of rupture of cerebral, abdominal, and other aneurysms I hope to be able to refer to in a subsequent note.

TWO CASES OF "ELECTRIC-LIGHT BLINDNESS."

BY ROBERT HILL, M.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON, ROYAL NAVY (H.M.S. "VICTORY").

I VENTURE to forward for publication in THE LANCET the following cases that have come under my notice lately, hoping that they may be of interest to its readers, and more especially to those engaged in ophthalmic work.

CASE 1.—About 1 A.M. on June 1st, 1897, I was called hurriedly to see a man who was said to be suffering great pain in his eyes. The man, a stoker, twenty years of age, I found walking round the sick bay of this ship in an agony of pain, with his hands up to his eyes from which the tears were literally pouring. The lids were kept firmly closed, and all my efforts to see the eyes proved futile until I had dropped in cocaine, which acted like a charm. Five minutes later he could distinguish the number of persons in the room, but not the number of fingers held up. The pupils were moderately dilated (probably due to the cocaine); the palpebral conjunctiva was deeply congested, with but slight reddening of the bulbar conjunctiva; the cornea was clear. I imagined some irritant had been applied, but he denied this, nor could I find any trace of any substance such as pepper likely to cause the condition. Cold applications were used and the patient soon fell asleep. At 8 A.M. his vision was normal, but the conjunctiva was injected, and he complained of a sticky sensation in his eyes. He then gave me the following history. When at work in H.M.S. *Mars* on the afternoon of May 31st he had stopped for about three minutes to look at the electric drill which was being used to bore holes in a steel plate, standing at a distance of from ten to twelve yards; on resuming his own work everything appeared to him of a deep gold colour, but he had no pain or lacrymation. He turned into his hammock at 9 P.M., and woke up in great pain at 12 30

CASE 2.—At 9 A.M. on June 1st a stoker, aged twenty-eight years, who had been sleeping on shore, came to the sick bay complaining of his eyes. He stated that he had been working in H.M.S. *Mars* on the previous afternoon, and, like the patient in Case 1, had stopped to see the electric drill working, and had noticed during the remainder of the day that everything appeared of a deep gold colour. About 4 A.M. he had jumped out of bed in great pain, and this had lasted about an hour and a half. The condition of the eyes was very similar to that described in Case 1—injection of the conjunctiva being the only abnormal condition. Vision was normal.

Ever since the electric light has been in use workers at this trade have been subject to attacks of blindness, and cases have been recorded in which erosion of the cornea has followed the inflammation induced. Dark glasses are now always used by men so employed. The electric drill acts by fusing a hole through the steel, and probably the intensity of the light is greatly increased by the rays of light thrown off by the molten metal. The fact that the work is carried on chiefly in the daylight hides to a casual passer-by the extreme brilliancy of the light, and it is not until the patient experiences abnormal colour sensations that he is aware of anything extraordinary. When first this drill was used in Chatham Dockyard Surgeon P. N. Randall had a few similar cases among the dockyard hands, but as they slept on shore he had no opportunity of observing the acuteness of the pain.

The pathology of this condition has been stated to be similar to that of snow-blindness or desert blindness, and to depend on irritation of the branches of the ophthalmic division of the fifth nerve. In the cases above recorded the irritation would appear to have gone on to absolute paralysis and the pain to have been due to the acute congestion attending the nerves in their action of regaining their normal function. A somewhat analogous train of circumstances is found in the paralysis of the sensory nerves of other parts of the body when exposed to extreme cold, such as the ether spray or frost-bite, and the pain in these cases is often very great when the congestion attending the "coming to" of the part takes place. The short period during which the severe pain lasted is also in favour of this analogy. The close sympathy that exists between the second nerve and the branches of the ophthalmic division of the fifth nerve is shown in many common and well-known reflexes, such as lacrymation and sneezing on sudden exposure of the eye to a bright light, or, conversely, the dread of light that is caused by any injury to the cornea. In the class of cases described we have a marked instance of the first class of reflex. A temporary paralysis of some of the optic nerve terminals is induced by the exposure to the intense light and heat of the electric drill as shown by the subjective colour sensations experienced. The corneal terminals reflexly share in the paralysis; lacrymation and photophobia are absent because the nerve terminals are paralysed and not merely irritated at the time. After the lapse of a few hours a reaction with temporary congestion is set up as manifested by the acute pain and lacrymation, and probably some mistiness of vision. The longer the exposure to the bright light the profounder the paralysis and the more intense and lasting the reactionary symptoms. These cases are, in fact, analogous to snow-blindness, and, as in them, the pernicious effects of the electric light are probably due to the ultra violet rays of the spectrum.

Portsmouth.

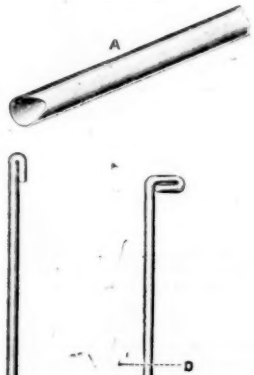
THE TREATMENT OF LACRYMAL OBSTRUCTION BY STYLES.

BY R. SHALDERS MILLER, F.R.C.S. ENG.

THIS little section of surgical therapeusis has probably been less successful than the operative treatment of other disorders of the eye and its subsidiary apparatus.

Since 1877, when I first became a clinical assistant at the Royal London Ophthalmic Hospital, Moorfields, it has been my habit to treat all organic strictures of the lacrymal duct—that is, all parts of the outfall from the lower punctum lacrymale to the exit in the inferior turbinate sinus of the nose—by styles, in most cases permanently retained. Except for temporary wear they should be made of pure platinum wire, about 25 gauge, and I always make them myself for each individual case. The shape, direction, and length of the nasal duct being variable this special adaptation is the key to success in the use of styles, which consist of a vertical stem with a short arm bent at or about a right angle to the stem and usually this arm is made double by recurving the wire back to the stem, so that the arm consists of two thicknesses of wire, parallel and quite close together, the recurved part being vertically beneath the other, or upper, part. In this way the slit in the edge of the lid is just filled up, but no

FIG. 1.



A shows the wire (magnified for clearness) with an oblique notch filed in the end to fit into the angle between the arm and the stem. B indicates the first bending of the wire, the notch facing the stem. C indicates the final bending, and D the place where the stem is cut off.

metal is visible unless the lid be everted. Sometimes the furrow produced by slitting up the canaliculus is very shallow; then the arm of the style is single. The length of the arm should be such that it easily fills the slit-up canaliculus; it should not be tight. The stem should always be long enough to project through the lower opening of the duct in the inferior nasal sinus.

The practical effect of a style in maintaining the patency of the lacrymal exit depends upon the lateral movements of the lower lid, imparted by those long, straight muscular fibres which take origin at the tendo palpebrarum and run horizontally outwards to the surface of the malar bone and are anatomically quite separable from the oval bundles of the orbicularis proper. The tubular styles of the instrument makers are worse than useless; they soon become choked with mucus and dust. Also in the case of the grooved styles the necessarily thin edges of the groove cause irritation and the production of a granulation which stops the way. The stem should not be straight, except in the case of a very short duct, but somewhat concave outwards. The lower opening of the duct may be obstructed by a lower turbinate excessively curved towards the outer nasal wall, but even this is scarcely an excuse for turbinotomy.

I have found no difficulty in pushing a probe through the turbinate bone, and the style, made long, follows suit. Some of my patients have worn a platinum style for eight or more years without its ever having been removed from the moment of its first introduction. In every case of lacrymal abscess a style ought to be used—for a time at least—and in most instances is needed permanently; but a temporary one must be first introduced, of a form modified according to the amount of swelling in the part. Such style may be of lead or silver, and several different forms and sizes are sometimes desirable in succession to suit the changing size and shape of the lid and canthus. I have once found it necessary to make an eyed probe of lead wire, pass it through the duct and anterior naris, and, by means of a thread attached, pull a fine drainage tube through and thus restore a lacrymal passage which had been obliterated by an encysted abscess for sixteen years. A platinum style was afterwards worn with a perfect result. The wire for making these styles, together with more detailed information as to their manufacture, may be obtained of Messrs Curry and Paxton, Great Portland-street, W., who have lent the blocks for the accompanying illustrations. They will also make platinum styles from patterns of lead wire supplied to them by those who prefer not to undertake the construction of permanent instruments.

FIG. 2.

In the little operation preliminary to the insertion of a style the chief obstacle likely to be met with is the spur or projecting angle (see Fig. 2) formed by the lower boundary of the conjoint opening of the canaliculi and the adjacent part of the lacrymal sac—that is to say, the outer wall of the sac below the opening of the canaliculi. The lower canaliculus is slit up with either a Stilling's or a Weber's knife. The latter sometimes finds its way more easily, but as a rule I use a Stilling's knife throughout. I have here drawn (*vide* dotted lines in figure) an exact representation of my favourite knife, which has been reduced by several occasions of sharpening to a somewhat more slender form than the original. This traverses the canaliculus easily, and yet is strong enough at the base to be safe from breakage. A Weber's knife should never be passed down the duct; the blade is apt to stay there, of which mishap several examples have come to my knowledge. The canaliculus being slit up, the Stilling's knife is passed down the duct in the ordinary way, and in withdrawing is rotated till the edge of the blade looks directly outwards and the handle is inclined towards the external angular process of the orbit so as to bring the edge of the knife firmly against the abovementioned spur (see Fig. 2), which is divided in drawing out the knife. A Couper's probe, about size 5 or 6, is then passed and allowed to stand for a minute or two, and the length of the part introduced is noted when the probe is withdrawn. The stem of the style should generally be about an eighth of an inch shorter than such measurement. It might be supposed that the division of the spur would cause hæmorrhage into the sub-palpebral tissues. This rarely happens, and when it does nothing more than a "black eye" ensues, and this can be reduced to almost nothing by tying up the eye with a pad kept wet with hazeline for a few hours. Styles are, of course, not needed in cases of temporary lacrymal obstruction, such as acute catarrh of the sac and comparatively recent mucocele, or in some obstructive conditions resulting from nasal disease. Irrigation with mild antiseptic fluids should have a fair trial before adopting any operative measure, except in lacrymal abscess. The repeated passing of probes is highly objectionable, and styles made of improper materials are perhaps worse.

The movement of the tears towards the inferior turbinate sinus is initiated by the capillary effect of the canaliculi, and by the action of the tensor tarsi muscle, and is continued by the ciliated epithelium which lines the sac and ductus ad nasum. But capillarity is not an attribute peculiar to cylindrical tubes; it occurs equally well between plane surfaces, as every worker with the microscope is aware, and a properly slit canaliculus is not a yawning chasm but a neat cleft with flat parallel surfaces in contact with each other and when a well-fitting style is *in situ* capillary attraction goes on readily between the style and the inner surfaces of the furrow containing it. Capillarity is a physical property which is more or less manifest whenever a liquid is in contact with a solid. An occasional cause of lacrymation, partly due to irritation and partly to obstruction, is the presence in either the upper or lower canaliculus of an eye-lash which leaves a short piece of one end projecting from the punctum. This end scratches the eye, and I have known the resulting irritation mistaken for "hay-fever." This impaction of an eye-lash has come under my observation twice in the lower canaliculus and once in the upper.

Windsor.

NELSON AS A PATIENT.

BY EDMUND OWEN, F.R.C.S. ENG.,
SURGEON TO ST. MARY'S HOSPITAL.

A FEW months ago Mr. C. Fraser-Mackintosh, of Inverness, showed me an autograph letter of Nelson's, which, to the best of his belief, had never been published. As I deemed it of considerable interest from a surgical point of view I asked for the loan of it so that a *facsimile* might be made for THE LANCET. This he kindly granted.

Exactly 100 years ago to-day—namely, on the night of July 24th, 1797—Nelson with about 900 men left the frigates which were anchored off Teneriffe and proceeded in open boats to the desperate attack on Santa Cruz with what Captain Mahan calls "superb courage."[1] "In the act of stepping out of the boat," says Southey, "Nelson received a shot through the right elbow and fell." He might have bled to death. But even at that time the principles of First-Aid, which the benevolent Society of St. John of Jerusalem have in recent years done so much to popularise, were not unknown, for we are told that one of Nelson's officers bound some silk handkerchiefs tightly above the lacerated vessels and so arrested a profuse hæmorrhage, whilst "one of his bargemen tore his shirt into shreds and made a sling with them for the broken limb. ..... Had it not been for this Nelson must have perished." As soon as he was once again aboard he told the surgeon to get his instruments ready, for he knew that he must lose his arm, and that the sooner it was off the better. Unfortunately, after the amputation the nerve (the median, I suppose) was included in the silk ligature which secured the main vessel. This was truly a calamity; it caused the hero intense and prolonged suffering. In those days the ligature-threads were not cut short as now, but were brought out at a corner of the wound to provide a needful drain for the customary septic discharge; and some of us can recall instances in which a premature attempt to get away a ligature was followed by alarming secondary

[1] The Life of Nelson. London: Sampson Low and Co. 1897.

hæmorrhage. The presence of the ligature in the case of Nelson must have given neuralgic pains which were referred to the hand and fingers of the amputated limb, and, what to him was equally serious, the fact of the wound not being healed kept him fretting on shore when his sole desire was to be on active service.

Captain Mahan says that the ligature had been "awkwardly" applied. I suppose that even a surgeon need not take exception to his use of this adverb, for though its first meaning is "clumsily," it may simply mean "unfortunately." Nelson, however, did not say that the artery was "awkwardly" secured. He was too loyal a patient to use such a word, and I do not believe that he ever thought it. He alluded to the inclusion of the nerve as an "unlucky circumstance," and when writing to his wife he said, "I am fortunate in having a good surgeon on board." Certainly no surgeon would use the word "awkwardly" in connexion with the accident; it would be ungenerous and would suggest lack of dexterity on the part of the operator. Indeed, as we look back upon that sorrowful early morning after the glorious failure at Teneriffe the surgeon of the *Theseus* receives a fair share of our kindly sympathy. He had no friendly help from ether or chloroform, and his patient was weak from loss of blood—not another drop must be lost. To-day he would be prepared to supply such deficiency by the injection of a pint or more of hot salt water into a large vein. The amputation had to be done at lightning speed; as we know, the sea was rough, and we can imagine the scanty illumination below decks. Indeed, not only the field of operation, but the entire ship must have been shrouded in gloom and depression.

Returning to England Nelson joined Lady Nelson at Bath, where he continued to be the subject of "much pain and some fever." For the ligature still held to the nerve, and the granulation-tissue lining the two-inch sinus was continuously absorbing small doses of the septic discharge. This auto-intoxication could not fail to make him ill and unhappy, and it probably caused him to be the subject of headaches, thirst, perspirations, and shiverings. Probably, also, this association of symptoms constituted the evidence of the "fever" to which he alludes. Or, as there was no clinical thermometer in those days, the presence of fever may have been recognised by the mere application of the surgeon's hand to the surface of the patient's body—an extremely fallacious method of examination.

A consultation was held in England as to whether the nerve could not be freed of the lingering ligature; but we learn that the surgeons were afraid to cut blindly into the depths of the sinus lest they should at the same time wound the artery with the scissors. So no interference was undertaken, and our hero was left to suffer. In similar circumstances, at the present time, the wound would be promptly and deliberately opened up and the removal of the ligature safely effected. But a hundred years ago surgeons were in constant dread of secondary hæmorrhage from operation wounds—a contingency which aseptic surgery has practically abolished from our midst. They would not have dared to separate the adhering flaps of the stump lest, so doing, they might be courting disaster.

Whether in hospital work or in private practice soldiers and sailors make the best of patients. They give a willing obedience to all instructions and they take things as they come, without question or complaint. Here was Nelson on Oct. 2nd, 1797, in constant distress because a large nerve was by misadventure tied along with the artery, and speaking of its inclusion as an "unfortunate circumstance." *O si sic omnes.*

Southey says that the first letter that Nelson wrote with his left hand was to Lord St. Vincent. It is not improbable that this is an error, as he appears to have written a very early one to the bride of his friend, Captain Thomas Freemantle, who, like Nelson, had been shot in the arm in the attack upon Santa Cruz. I have not the date of that letter; it runs thus:—

"MY DEAR MRS. FREEMANTLE.—Tell me how Tom is; I hope he has saved his arm. *Mine is off*, but, thank God, I am as well as I hope he is.

"Ever yours,

"HORATIO NELSON."

The letter above produced in *facsimile*, being dated Oct. 2nd, 1797, was written within ten weeks of the amputation of Nelson's right arm, and it has the great merit of being perfectly legible. I have professional friends who cannot write half as clearly as this with either hand, and as to the hurried handwritings in papers which one has to decipher in the course of a certain examination, many would be discreditable to boys from the fifth standard of a Board school. But our profession has not the monopoly in bad writers. It would be an interesting, and probably a valuable,

No. 141, Bond Street.

Oct. 21, 1797.

My Dear Sir,

I am much obliged by your kind enquiries, My arm from the unlucky circumstance of a Nerve being taken up with the Artery is not yet healed nor do I see any prospect of the ligatures soon coming away

Horatio Nelson

experiment, if all bad writers were compelled to educate their left hand in the use of the pen; this might have the advantage of making their communications precise as well as clear. I cannot but think that in the case of some writers the cells upon the wrong side of the brain have been forced to specialise in the graphic function, and that a little practice with the other hand might afford a cellular group in the other cerebral hemisphere the opportunity of taking up their neglected but proper office. In my opinion, too narrow a specialism of the cells of the left motor area is undesirable, the individual using his right hand for all the finer acts. For my own part, I like to see a child indiscriminately putting out his left hand to greet a friend, or holding his knife or scissors in it. But so surely as he does it some relative or nurse calls out, "The other hand, dear." A very considerable proportion of our best bowlers are left-handed; fortunately there was no Mrs. Grundy in the playground or cricket-field to interfere with the course of Nature and to render their movements artificial. In some cases the motor areas upon the two sides of the cricketer's brain have established a sort of compromise, and so we see the man bowling with his left hand and batting with his right. I think that every man who intends to use a razor should learn to shave with his left hand as well as with his right; he cannot say but that the lesson once learnt may some day be of the greatest use to him.

Great Cumberland-place, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF GONORRHŒA WITH EXTENSIVE SUPPURATION; URINARY AND FÆCAL EXTRAVASATION.

(Under the care of Mr. CLEMENT LUCAS.)

THE number of complications that may accompany an attack of gonorrhœa is very large, and the following case is a noteworthy instance of the very widespread suppuration that may occur in this disease. The noteworthy points are the formation of a sinus above the pubes and the development of the fistula opening into the bowel. For the notes of the case we are indebted to Mr. C. H. Fagge, house surgeon.

A man, aged twenty-one years, was admitted into Guy's Hospital on March 4th, 1897, complaining of a swelling in the perineum. In November and December, 1896, the patient had suffered from gonorrhœa and was treated privately, and when the discharge stopped about Christmas he noticed that he had much difficulty in micturition, which culminated in complete retention. Catheters were used for five days, and by their means the spasmodic obstruction was overcome, and he has since passed urine freely. About a week after catheterism was abandoned he noticed a swelling in the perineum; it was very tender and painful, and the pain was greatly increased on micturition. Soon after this a swelling formed above the pubes, and he experienced shooting pains passing from the perineum upwards to the front of the abdomen. The swelling above the pubes pointed and was opened, and pus was evacuated. Lately he had noticed that a little urine came away per rectum at the end of micturition, and that flatus escaped from the opening above the pubes, and from this opening urine also sometimes dribbled after micturition. His family history was good, and he had always had good health, excepting an attack of pleuro-pneumonia five years previously. On admission the patient was seen to be pale and somewhat emaciated. In the middle line, three inches above the umbilicus, was the opening of a small sinus, from which a little pus could be expressed; the skin surrounding the opening was brown, indurated, and tender. In the perineum was an oval, lax, fluctuating swelling extending from the back of the scrotum to the anterior margin of the anus. On pressing this swelling flatus escaped through the sinus in front. In the globus major of the right epididymis was a hard nodule about the size of a cherry stone. The urine was acid and contained a trace of albumin; small quantities of blood and pus were also present. On March 5th Mr. Lucas made a rectal examination and found on the anterior wall of the bowel an opening with tender swollen edges, situated about three-quarters of an inch from the anus. An anæsthetic (A.C.E.) having been given, a probe was inserted into the sinus in front, and it was found to pass downwards. This sinus was slit up as far as the pubes and was thoroughly irrigated. The patient was then put in the lithotomy position, and the fluctuating perineal swelling was laid open from scrotum to anus, the sphincter, however, not being divided. A probe was then introduced and was found to enter the rectum through the opening already mentioned; a little pus was washed out and the cavity packed with iodoform gauze, and over this an antiseptic dressing was applied. On March 8th the packing was taken out of the perineal wound and was found to be saturated with fæcal matter, which was also present in the wound. The patient complained of much pain, which was increased by movement and by micturition. On March 11th he said that he felt better and stronger; there was less pain; micturition, which occurred every four hours, was, however, painful. By March 12th the wound above the pubes had contracted, leaving a healthy granulating surface measuring about three inches by two and a half inches. The perineal wound did not look so healthy, and a small quantity of urine appeared to come through the sinus occasionally. He now had some constipation, and though after purgatives the bowels were opened a small quantity of blood was passed with the motions. From the perineal opening urine continued to flow occasionally. On March 20th the patient strained greatly at stool, but was unable to pass any motion. As a result of the straining the perineal wound opened more, with slight bleeding; the suprapubic wound still extended upwards two inches from the pubes, but it was doubtful if it communicated with the perineal wound. Both the wounds were syringed with a solution of perchloride of mercury and were then filled with iodoform gauze. On March 22nd the temperature in the evening was 102·4° F., and later there was some sweating, this being apparently due to septic absorption. The evening rise and morning fall of the temperature continued until April 1st, when the patient felt better. An anæsthetic was given, the perineal wound was more freely opened and thoroughly scraped out, a blunt director was passed from the perineal wound into the rectum, and the intervening tissues were divided. Iodoform powder and gauze and an antiseptic dressing were applied. This dressing was continued daily and the wounds steadily became smaller, and by May 29th the suprapubic wound was almost healed. A No. 9 coudé catheter was passed, and a few days later a No. 10. On June 4th the wounds had both nearly healed and the patient was ready to leave the hospital.

EDINBURGH ROYAL INFIRMARY.

PROGRESSIVE PERNICIOUS ANÆMIA OF UNUSUALLY RAPID DEVELOPMENT, ASSOCIATED WITH MARKED JAUNDICE, ETC.; RAPID RECOVERY UNDER LARGE DOSES OF ARSENIC.

(Under the care of Dr. BYROM BRAMWELL.)

TO Addison is undoubtedly due the credit of first recognising "idiopathic" or "pernicious" anæmia as a definite disease, though it has been customary to associate the name of Biermer, of Zurich, with the discovery. At the present time we are hardly nearer a knowledge of the cause of this disease than when it was first described, but it may be taken as extremely probable that a toxin is the immediate cause, and the results obtained by Dr. William Hunter by the injection of tolylene-diamine point strongly in the same direction. Dr. Byrom Bramwell must be credited with the introduction of arsenic in the treatment of pernicious anæmia, and in some cases it certainly effects a cure, but in others its administration seems to be without any benefit.

A man, aged fifty-three years, was admitted to the Edinburgh Royal Infirmary on May 3rd, 1897, complaining of great general weakness and jaundice. The patient stated that three months previously he began to feel a little sick after taking food, but that until six weeks ago he was out with shooting parties every day and was able to do his regular work, which involved much hard

hill-climbing, without difficulty. On March 10th he noticed that his skin was yellower than it used to be and that the urine was dark in colour. About the same time he experienced some pain in the upper part of the abdomen, and became so weak that he had to give up work. The weakness and jaundice steadily progressed, and he got thinner. He also suffered from headache and constipation. Latterly his sight became somewhat dim. During the last three weeks he got rapidly worse and vomited occasionally. Up to the commencement of this illness he was a very robust and healthy man; indeed, with the exception of an attack of influenza two and a half years ago, from which he perfectly recovered, he had never been ill. He had always been very temperate with regard to alcohol. He knew of no cause for the present illness. As regards his family history, his parents were long-lived. He had had four children; two died from diabetes at the ages of seventeen and twelve years respectively; the other two were quite healthy. On admission the patient's chief complaint was extreme debility. He was deeply jaundiced and at the same time profoundly anæmic. Instead of the delicate lemon-yellow hue characteristic of pernicious anæmia the colour of the skin resembled that of a ripe banana. The muscles were somewhat wasted and flabby, and there was little fat on the surface of the body. There was some œdema of the feet. The patient's weight was 12 st. 2 lb., and his height 6 ft.; his normal weight was 12 st. 6 lb. On the evening of admission the temperature was 100°F. The patient stated that he was very short of breath on exertion, and that he was giddy when he stooped or suddenly rose from the recumbent to the erect position. The heart did not appear to be enlarged; the cardiac impulse and sounds were very feeble; there were no cardiac murmurs. A well-marked venous hum was present in the neck. The radial pulse, which numbered ninety-six per minute, was small in volume and of low tension. The condition of the blood was highly characteristic of pernicious anæmia. The red blood corpuscles numbered 810,000; the hæmoglobin equalled 20 per cent. On microscopical examination the red corpuscles did not go into rouleaux. Many of them were larger and many of them were smaller than normal. Most of them were irregular in shape. Many of the red corpuscles appeared to be nucleated in consequence of the hæmoglobin being concentrated at one point of the corpuscle; but after staining with various reagents no true nucleated red corpuscles could be seen. Some small deeply pigmented corpuscles (Eichhorst's corpuscles) were present. The leucocytes were not increased in number. The blood plates appeared to be normal. The blood did not seem to contain any organisms. Dr. Robert Muir made and incubated several cultivations, but with negative results. Many minute hæmorrhages were seen in both retinæ; some radiated in striated lines round the discs, others more punctiform in shape were scattered over the retinæ, for the most part in the course of the vessels. There was no optic neuritis. The respiratory system was normal. The appetite was very poor and the tongue was thickly furred. The patient stated that he often felt sick, but rarely vomited. The bowels were constipated. The stools were of a bright orange (burnt sienna) colour. No parasitic organisms could be detected in the stools on microscopic examination. There was some tenderness over the lower margin of the liver, which extended for one and a half inches at least below the margin of the ribs. The upper margin of the liver, as determined by percussion, corresponded to the upper border of the fourth rib. The spleen appeared to be of normal size. The urine was normal in amount, dark amber coloured (much less dark than might have been expected from the acuteness of the anæmia and the intensity of the jaundice), acid, its specific gravity 1016; it contained a small amount of albumin and a trace of bile, and on microscopical examination a few hyaline casts. The patient complained of some headache—sometimes frontal and sometimes occipital. He stated that since his illness commenced he had been more sleepy than formerly. The knee-jerks were markedly diminished, but there were no other symptoms suggestive of disease of the cord. The patient was kept in bed, and milk diet and gradually increasing doses of arsenic (Fowler's solution) were prescribed. On May 7th seven drops of Fowler's solution three times daily were prescribed by Dr. Coleman, the house physician (Dr. Bramwell usually begins with a smaller dose), and this dose was increased by three minims daily until the 20th, when the patient was taking the very large quantity of sixty minims. After this the dose was reduced to forty minims per diem. The daily temperatures were as follows:—May 3rd, E. 100°F.; May 4th, M. 98·2°, E. 100°; May 5th, M. 98·6°, E. 99·6°; May 6th, M. 98·0°, E. 99·6°; May 7th, M. 99·0°, E. 99·8°; May 8th, M. 98·6°, E. 97·8°; May 9th, M. 97·4°, E. 98·6°; May 10th, M. 97·4°, E. 97·4°; May 11th, M. 97·6°, E. 98·2°; May 12th, M. 97·8°, E. 98·2°. On and after May 13th the temperature continued normal. The pulse was 96 on May 3rd, 4th, 5th, and 6th; on May 7th and 8th it varied between 96 and 116, but on the succeeding days it declined. The patient's bowels were moved once daily on May 4th, 7th, 8th, 10th, and 11th. On the 6th the urine deposited a large quantity of orange-coloured sand, which consisted of very minute crystals of uric acid. On the 9th the temperature, which since the patient's admission had risen to about 100° each night, was subnormal. Uric acid was still present in considerable quantity in the urine. On the 10th the jaundice was less marked, and the patient stated that he felt less sick and that his appetite was improving. The red blood corpuscles numbered 970,000, and the leucocytes 13,000 per cubic millimetre; the hæmoglobin equalled 28 per cent. The urine continued to deposit a considerable quantity of uric acid. On the 16th the patient was steadily improving and he felt much stronger. The feeling of nausea in the morning, which had been a good deal complained of, was less. The heart's action was more forcible. The stools still had the same yellow ochre colour, and the urine continued to deposit large quantities of uric acid crystals. The lower margin of the liver did not then extend below the margin of the ribs. A marked improvement had taken place in the condition of the blood. The red blood corpuscles now numbered 1,710,000, and they were much more normally shaped; the white corpuscles numbered 12,000 per cubic millimetre; and the hæmoglobin equalled 40 per cent. The patient was taking forty-eight minims of Fowler's solution per diem. On the 18th the patient complained of irritation of the eyes, as if they were filled with sand, and of a feeling of sickness. The urine still contained a small quantity of albumin and a few hyaline casts, but it no longer deposited uric acid crystals. The feet and legs were still œdematous. The amount of arsenic was increased to fifty-four minims daily. By the 20th the dose of arsenic had reached sixty minims per diem. On the 21st a vesicular (herpetic) eruption commenced on the left side of the forehead, and the dose of arsenic was reduced to forty minims per diem. On the 23rd the patient felt much better; he was much less anæmic, the jaundice had almost entirely disappeared, the red corpuscles numbered 2,650,000 per cubic millimetre, and the hæmoglobin equalled 42 per cent. On the 26th, though the feet were still slightly swollen, the patient was rapidly improving and feeling much stronger. The urine was now free from albumin. On the 30th the red corpuscles, which now numbered 2,950,000 per cubic millimetre, were for the most part normal in shape; the hæmoglobin equalled 46 per cent. The urine then contained phosphates, but no albumin. The vesicular (herpetic) eruption which had developed six days previously on the left side of the forehead had almost completely disappeared. The eyes were still "sandy" and the throat was a little dry. On June 8th it was noted that the patient had been up for the past two days. The lips were red and the face was injected. Retinal hæmorrhages were no longer present. The red blood corpuscles, which were for the most part normally shaped, then numbered 2,700,000 per cubic millimetre, and the hæmoglobin equalled 64 per cent. On the 14th the red blood corpuscles numbered 3,420,000 per cubic millimetre, and the hæmoglobin equalled 64 per cent. Some of the red blood corpuscles were still mis-shaped, and a few Eichhorst's corpuscles were still present. One or two large leucocytes containing numerous minute particles of dark brown pigment were seen in the specimen of blood examined on this date. The patient's weight had decreased during the last fortnight. On May 12th he weighed 12 st. 2 lb.; on the 22nd, 12 st. 5 lb.; on the 29th, 12 st. 5 lb.; on June 5th, 12 st. 1 lb.; and on the 12th, 11 st. 12 lb. The urine was free from albumin. Since May 30th the patient had taken forty minims of Fowler's solution daily. On the 15th the patient left the hospital, feeling, he said, perfectly well. He was advised to continue the arsenic in smaller doses (twenty-four drops daily) and to return at once for treatment if a relapse should occur. The remarkable change in his appearance was shown by the following circumstance. Before his discharge he was sent with a note asking Dr. Muir to re-examine the blood. Dr. Muir did not recognise him, and wrote back requesting that the patient should be sent to him for examination. On July 20th the patient reported himself at the infirmary. He looked the picture of ruddy health and stated that he felt quite well. The red

corpuscles numbered 4,010,000 per cubic millimetre, the white corpuscles 14,000; the hæmoglobin equalled 88 per cent. (Gowers's instrument); the red corpuscles were normal in shape; no Eichhorst's corpuscles were seen. The patient was advised to go on with the arsenic. The steady improvement in the condition of the blood is shown in the following table:—

Table showing the Condition of the Blood and Dose of Arsenic at Different Dates.

Date.	Number of red blood corpuscles per cubic millimetre.	Percentage of hæmoglobin.	Number of white blood corpuscles per cubic millimetre.	Dose of liquor arsenicalis per diem.
May 5th	810,000	20	—	20 minims.
May 10th	970,000	28	13,000	40 ,,
May 16th	1,710,000	40	12,000	50 ,,
May 20th	—	—	—	60 ,,
May 23rd	2 650,000	42	—	40 ,,
May 26th	2,960,000	46	—	40 ,,
June 8th	2,700,000	64	—	40 ,,
June 14th	3,420,000	64	12,000	40 ,,
July 20th	4,010,000	88	14,000	

Remarks by Dr. BYROM BRAMWELL.—This highly characteristic case of pernicious anæmia presents several points of great interest. The more important are:—1. The rapid development. It is, I think, the most acute case which has come under my own notice. Though some pain in the region of the stomach was experienced at the beginning of January the patient did not feel ill, and no symptoms were observed until six weeks before his admission to hospital. 2. The causelessness of the attack. So far as could be ascertained there was absolutely no cause (intestinal or other) for the disease. 3. The absence of organisms in the blood. The blood contained no organisms. For many years past I have stated in my lectures that some cases of pernicious anæmia are perhaps due to the presence of some form of micro-organism in the blood. This case, in which the symptoms were so profound, the duration so short, and the course so progressive seemed to be a most suitable case for testing this question, and it is important to note that Dr. Muir's observations were attended with negative results. But this by no means proves that in all cases of pernicious anæmia micro-organisms are absent from the blood; for, as I have stated in a recent article,[1] it is not improbable that the condition which we term progressive pernicious anæmia is perhaps a group of clinical symptoms (which may be due to a variety of causes) rather than a single disease—a single clinical entity. It is possible, if this view is correct, that in some cases of pernicious anæmia organisms are present in the blood, while in others they are absent. 4. The presence of Eichhorst's corpuscles in the blood. These small, deeply stained corpuscles are in my experience rare. I have never seen them so numerous as they were in this case. 5. The intensity of the jaundice. I have never met with any case of pernicious anæmia in which the jaundice was anything like so deep as it was in this case; and yet the stools were of a deep orange (yellow ochre) colour and the urine only contained a faint trace of bile. Further, it should be noted that on the patient's admission the liver was enlarged and tender. 6. The colour of the urine. The urine was never very dark—it was dark amber coloured; it was much less deeply pigmented than one might have expected considering the severity of the case, the acuteness of its development, and the intensity of the jaundice. 7. The absence of parasitic organisms in the stools. 8. The presence of albumin and a few hyaline tube casts in the urine. The albumin and casts were merely temporary; but even the temporary presence of albumin is in my experience quite exceptional in cases of pernicious anæmia. The hyaline casts were probably the result of the jaundice. In my experience—and this important clinical fact is not, I think, sufficiently known—hyaline casts are almost invariably (I am disposed to think invariably) present in cases of well-marked jaundice. 9. The copious uric acid deposits in the urine. I have met with one or two other cases of pernicious anæmia in which large quantities of uric acid were deposited in the urine; in one case the patient suffered from recurring attacks of gout. 10. The absence of any degree of cardiac dilatation and of cardiac murmurs. Considering the extreme degree of the anæmia these were remarkable features of the case, and are perhaps explained by the rapidity of the course of the disease and the short time that it had been in existence when the patient came under observation. 11. The large doses of arsenic which were administered (for several days the patient took no less than from fifty to sixty minims of Fowler's solution in the twenty-four hours) and the remarkably rapid recovery which took place both in the condition of the blood and as regards the jaundice and other symptoms under the arsenical treatment. Since I first employed arsenic in the treatment of pernicious anæmia in the year 1875 I have not met with any case in which the results have been more satisfactory than in this case. It is probable, I think, that in this case the acuteness of the disease favoured the success of the treatment. In the advanced stages of severe and long-continued cases, arsenic, and every other plan of treatment often, as might be expected, fail to produce any beneficial effect. 12. The development of a herpetic eruption on the forehead during the arsenical treatment. Mr. Jonathan Hutchinson has directed attention to the fact that herpes zoster is in some cases apparently the result of arsenic. This is of great interest, especially when it is remembered that arsenic is a specific in many cases of recurring herpes of the vulva and in pemphigus.

[1] Atlas of Clinical Medicine, vol. iii., p. 134.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Hæmorrhage into the Broad Ligament.—Double Ovariotomy.—Dermoid Cysts of the Ovary.

A MEETING of this section was held on May 28th, Dr. LOMBE ATTHILL, the President, being in the chair.

Dr. J. H. GLENN being absent the Secretary read the following notes of a case of Hæmorrhage into the Broad Ligament arising from the Stump of an Ovarian Cyst, and Complicating the Puerperium:—In January, 1894, I removed a left ovarian cyst from a young married woman, whose age was stated to be twenty-seven years. The operation was simple, and the only feature of interest was an excessively varicose condition of the pedicle. This gave rise to a little more hæmorrhage than is usual, but was carefully ligatured and the patient went on uninterruptedly. On Jan. 27th, 1895, I delivered her of a living female child by forceps. On Sept. 19th, 1896, I was called again, but the infant was already born on my arrival; this time it was a boy, which is interesting, as she had only the right ovary. The uterus was firmly contracted and no trouble was experienced with the placenta, as it came away easily, neither was there any oozing. On palpation there was nothing now to be detected, but I did not feel satisfied as the patient's pulse was 110 and her aspect anxious. About fifteen minutes after the expulsion of the placenta I felt a swelling on the left side, which corresponded to the height of the firmly contracted uterus, strangely simulated a uterus bicornis, and soon rose almost as high as the lower border of the ribs in the mammary line, but little over the middle abdominal line. I awaited developments, and the patient recovered, her highest temperature being 99 4° F. I believe that here we had a rupture of one of the varicose veins mentioned above as seen in the pedicle. Five months after confinement the hæmatoma had dwindled to the size of a fœtal head and was distinctly fluctuating.—Dr. EMILY WINIFRED DICKSON said that it seemed difficult to her to imagine how the broad ligament could have suddenly become distended so much as to allow the tumour to reach up to the ribs.

Dr. E. WINIFRED DICKSON read a paper on Double Ovariotomy with eighteen months interval between the operations. The patient, aged forty years, was admitted to the Richmond Hospital, Dublin, in May, 1895, suffering from ascites and an abdominal tumour. An ovarian papillary cystoma was removed from the left side, and the patient made an aseptic recovery. Eighteen months later she presented herself in a very similar condition with ascites and a right-sided tumour. Respiration was very much impeded by the distension of the abdomen, but the laparotomy scar had not yielded. The abdomen was opened for the second time in

November, 1896, and a similar tumour was removed from the right side together with about six quarts of ascitic fluid. She rallied well after the operation, but died about six weeks later with all the clinical appearance of malignant disease; the post-mortem examination showed that it was an unusual form of recurrence.—Mr. O'SULLIVAN said that he examined both tumours after their removal and found both of them to be papillary cystic tumours, which appeared to him to be of a benign character. At the post-mortem examination he found an extensive fibrinous peritonitis. No secondary growths were found except in the peritoneum. He regarded it as a case of peritoneal infection by dissemination of the tumour cells through the abdominal cavity.

Dr. ALFRED SMITH showed three large Dermoid Cysts of the Ovary, which extended in each case above the level of the umbilicus. The patients made good recoveries.

Dr. KIDD exhibited a Double Dermoid Cyst removed from a patient aged thirty-three years. The larger tumour was of the size of a fœtal head, and the smaller one of about the size of a goose's egg. The patient made an uninterrupted recovery.

Reviews and Notices of Books.

Memories of Seven Campaigns: a Record of Thirty-five Years' Service in the Indian Medical Department in India, China, Egypt, and the Soudan. By JAMES HOWARD THORNTON, C.B., M.B., B.A., Deputy-Surgeon-General, Indian Medical Service (Retired), late Principal Medical Officer, Punjaub Frontier Force. With an Introduction by A. EGMONT HAKE, Author of "The Story of Chinese Gordon," &c., and Editor of "General Gordon's Journals at Khartoum." Illustrated by EDWARD THORNTON, A.R.I.B.A., and KATHERINE MARGARET THORNTON. Westminster: Archibald Constable and Co. 1895.

THIS is an age in which military and naval celebrities have collected and published their experiences and memorials. There has been of late quite an epidemic of this form of literature, beginning with a renewal of interest in everything relating to the greatest military, but not the most benevolent, character of modern times—the first Napoleon. The great literary success of the present time—owing to the easy, fresh, and natural style in which it is written, and the pleasant narrative form and varied character of its author's experiences—is probably the work by Lord Roberts. We are glad to welcome a book by a medical officer of long and distinguished service giving a record of his thirty-five years' service in India, China, Egypt, and the Soudan in connexion with the various campaigns in which he took part, together with the observations and impressions he has derived while serving in those countries. This volume serves to show how interesting and diversified an Indian medical officer's work and experience may be. The author entered as a student at King's College in 1851 and matriculated at the University of London in the same year. After going through the usual course of lectures and hospital attendance for two years he passed his first M.B. examination, and a year later took his degree of B.A. with honours, and in 1855 he became M.R.C.S. of England. He was selected by the Council of King's College Hospital for an appointment of assistant-surgeon on the Bengal medical establishment of the East India Company's service, and pending his reaching the age of twenty-two, before which time he could not be admitted into the service, he passed his final examination for the degree of M.B. Lond. in November, 1855. In March, 1856, he embarked for Calcutta, and the voyage out *viâ* the Cape occupied some three and a half months. He arrived at the mouth of the Hooghly River on June 28th following. It is worth mentioning that he was much struck by the beauty of the river banks and the mansions of Garden Reach scattered at intervals, as well as by the imposing appearance of the city. A closer view, however, soon dispelled these impressions. The sanitary condition of Calcutta is, we know, not all it should be at the present time, but it is certainly better than it was then. After remaining at the General Hospital in that city for about two months he was ordered to the Benares circle for duty. Shortly afterwards the Indian Mutiny commenced, and he was soon plunged into the midst of all the exciting and trying circumstances of that eventful time. This was followed by the war with China and various military expeditions of one sort and another in India, Egypt, and elsewhere, including some of the smaller expeditions involving a good deal of that exposure and hardship which so often accompany our Indian mountain warfare. It would be impossible within the limits of space at our disposal to follow the author in his descriptions of all he saw and did in his diversified career, for these occupy some 359 pages, exclusive of the introduction. The book is well illustrated, and the author in his "memories" has a good deal to recount that is both interesting and instructive, especially to those more or less acquainted with Indian life and travel and desirous of renewing their acquaintance with that country and of tracing some of the changes that have taken place in it since the author first entered the Indian Medical Service. We are glad to notice, by the way, that he speaks highly of the advantages of this service, declaring that these are still, in his opinion, superior to the inducements held out by any other medical service in any part of the world. We wish, however, that he had said more about his medical, as apart from his military, experiences than he has done.

Speaking of the Indian Mutiny Deputy-Surgeon-General Thornton pays a tribute of praise to the admirable conduct of the majority of native domestics in the service of Europeans in India during that crisis. Throughout the volume there are interspersed various practical observations and comments of a medical, sanitary, and administrative character which, if they are of necessity in a work of this kind lightly touched upon and of a somewhat sketchy nature, are, nevertheless, pertinent and useful. For instance, speaking of the climate of Hong-Kong and of the prevalence of malaria in connexion with emanations from disintegrating granite, he adverts to the necessity of leaving newly-erected buildings unoccupied for some time in order to safeguard the inmates against fever—a very necessary precaution where the soil has been excavated to make new foundations. He remarks that he has always regarded the burning of the Summer Palace in the war with the Chinese as a regrettable act of vandalism which destroyed some beautiful buildings and works of art, while it was altogether futile and ineffectual as a punishment for Chinese treachery and cruelty. The chapters dealing with Deputy-Surgeon-General Thornton's experiences in Egypt and at Suakin are distinctly interesting. The absolute immunity of the soldiers of the Indian contingent from enteric fever, from which officers and men of the British force suffered so much, the surroundings and general conditions in both cases being precisely the same, has not, he thinks, ever been satisfactorily explained. In addition to the descriptions of the more purely military part of his experience there are a number of incidents scattered through the volume which serve to enliven its pages. There is, for example, a droll story of an officer having sent in a report to the superintending engineer of the district of some interesting Buddhistic remains he thought he had discovered on the Kashmir road. These remains proved eventually to be the ruins of some bridges which had been erected many years before by an engineer of the district, but had been in great part carried away by the force of hill torrents. The feelings of the superintending engineer when this became clear to him may be readily imagined. We have said enough, however, we hope, to induce our readers to procure and peruse the book for themselves.

On Gall-stones and Cholelithiasis. By EDWARD MANSFIELD BROCKBANK, M.D. Vict., M.R.C.P. Lond. London: J. J. and A. Churchill. 1896. Pp. 301.

DR. BROCKBANK has in the short compass of this very handy volume produced a model monograph. There was, as he says in the preface, a "want in our literature of a work containing an account of the present condition of our knowledge of the disease." This want can no longer be said to exist. The book consists partly of an admirable collation of the latest work on cholelithiasis in this country and abroad, and partly of original researches by the author into the solvent action of various drugs on gall-stones. After a good short description of the biliary passages, and the different forms of gall-stones and their seats of formation, Dr. Brockbank gives a very lucid account of the chemistry of cholesterin and its most probable origin. He accepts the view that it arises chiefly from the mucous membranes which line the biliary passages, and he brings forward many pieces of evidence to support his contention. "With the cystic duct completely obstructed or obliterated, so that the access of bile to the gall-bladder is impossible, the latter is often found to contain fluid without any trace of bile in it, and which to the naked eye is seen to sparkle with crystals of cholesterin, and calculi in such a sealed-up gall-bladder show evidence of growth from the deposition of pure cholesterin on them." "The cholesterin may be formed as a result of the degeneration of the cell elements of the mucous membrane, but it is also possible that some of the glands which exist in profusion in the wall of the biliary passages may secrete it." While this is the main method of formation, a little cholesterin "is secreted by the liver from the blood, in which it exists already as a product of the metabolism of the tissue of the body, especially of the nervous system." After pointing out that cholesterin is soluble in a solution of bile-salts, but naturally insoluble in the bile acid, Dr. Brockbank sums up against the theory that decomposition of the bile-salts in the biliary system is the cause of the precipitation of cholesterin. "In the present state of our knowledge on the subject the change from a bile-salt to its corresponding acid, or the decomposition of bile acids which is supposed to take place during life in the biliary passages, and which lead to precipitation of the cholesterin held in solution by the bile-salts, are points which must be considered to be not proven."

The author describes fully the action of soaps on cholesterin and the transformation of the solid cholesterin into a viscous body. In the third, fourth, and fifth chapters the methods of evolution of a gall-stone are discussed in detail. "In young people the cast-off epithelial cells (of gall-bladder and ducts) are pale, but in older people and those who have died of tuberculosis, acute febrile affections or heart disease, and always where calculi already exist in the gall-bladder, the cells contain many fat globules and myelin forms. The latter have almost the same appearances as the bodies which I have described as forming when a solution of soap acts on cholesterin. These myelin forms exude or escape from the cells and swim freely in the bile either singly or in clusters. ..... Naunyn considers that the above-mentioned soft, amorphous cholesterin masses are one form of rudimentary gall-stone; and he also describes another form of rudimentary stone which consists of cholesterin in a hard, vitreous, amorphous condition, but which sooner or later shows evidence of crystallisation. ..... I have myself frequently seen both the soft and hard form of amorphous cholesterin occurring with the clusters of myelin forms, but I think that rudimentary calculi can arise in yet another way. I have explained previously how the soap-cholesterin bodies under the action of water lose their compound nature and are broken up, the cholesterin being deposited in the crystalline form. I have very frequently watched the myelin forms in bile from day to day, and have seen how they gradually disappear, and how crystals of cholesterin develop with great rapidity and in great profusion, and the question occurred to my mind as to whether the crystals which form in bile might not be deposited from the myelin forms by a process analogous to that which leads to their formation from the soap-cholesterin bodies." The part played by micro-organisms in the production of gall-stones, and the conditions under which they may be present in the bile are amply detailed. "If the presence of micro-organisms is an exciting cause of the formation of biliary calculi, it probably acts by the bacilli setting up a stone-forming catarrh of the mucous membrane of the biliary passages." The effect of nitrogenous food in increasing the production of bile-salts favours the view that gall-stones tend to occur more readily in people who eat sparingly of nitrogenous compounds.

The clinical and pathological portion of this book is well written. All the ordinary forms and complications of cholelithiasis are graphically set down and the differential diagnosis is clearly given, and a brief record is added of the rare abnormalities that may occur.

Chapter XIII., on the Medical Treatment of Gall-stones, shows judgment and balance. Dr. Brockbank admits that "not one new remedy of any great value has been discovered since Cod's time (1750)," and then proceeds to show how the old remedies may help, and in some cases even cure, the patient. He relates some experiments to test the solvent action of alkalies on gall-stones. "I found that the alkaline salts which occur in the various mineral springs, even when in strong solution in water, have not the slightest solvent action on a gall-stone. I kept gall-stones in solutions of the salts of various strengths, maintained at the body temperature, for periods of time varying from two to four weeks without there being any loss in the weight of the calculi at the end of the time." Various means were used for producing movements of the stones in the fluids, to imitate as far as possible the movements of the gall-bladder, but with no better result. And yet for various reasons the good results of a course of Carlsbad waters are absolutely beyond question. The effect of large doses of oil are also discussed. Chapters XIV. and XV. are devoted to the surgical treatment of gall-stones.

The volume is well worth careful reading, and gives a good account of our present knowledge of the subject.

A Practical Treatise on Mechanical Dentistry. By JOSEPH RICHARDSON. Seventh edition, revised, enlarged, and edited by GEORGE WARREN. With 692 Illustrations. London: J. and A. Churchill. 1897. Pp. 670. Price 22*s*.

THIS book is so well known that anything like a systematic review is hardly called for. That a seventh edition has been reached is alone sufficient evidence of its worth as a text-book on mechanical dentistry. The necessary knowledge and skill for the manufacture of dentures, crowns, bridges, &c., can only be properly obtained by constant practice, and it goes without saying that the mere reading of a text-book is not sufficient to make a person proficient in dental mechanics, but when reading is carried out in conjunction with actual practical work, then a book of this character becomes extremely valuable. Mr. Warren, who has edited this edition, is to be congratulated upon his work, for he has included all the most recent improvements, this being more especially noticeable in the chapters dealing with appliances for the Correction of Dental Irregularities and Crown and Bridge Work, while he has also found room for an excellent little chapter on Electricity and its Application in Dental Mechanics. The chapters on the Restoration of Palate Defects and Fractures of the Maxilla and Mandible should prove useful to the general medical practitioner. The latter subject is very fully dealt with, only, curiously enough

we find no mention of Hammond's splint, a method most valuable in the treatment of fractured jaws.

JOURNALS AND REVIEWS.

THE *Journal of Anatomy and Physiology*. Conducted by Sir WILLIAM TURNER, F.R.S., and J. G. M'KENDRICK, M.D. Aberd., F.R.S. Vol. XXXI. New Series, Vol. XI. Part 4. July, 1897. London: Charles Griffin and Co. Price 6s.—The death of Sir George Humphry, who was one of the founders of this journal, has led to the reorganisation of the editorial staff, and in future numbers the editors whose names appear upon the present title-page will be joined by Professor Alexander Macalister, of Cambridge, Professor D. J. Cunningham, of Dublin, and Professor G. D. Thane, of London. The present part contains the following articles: 1. On the Action of Infused Beverages on Peptic and Pancreatic Digestion, by James W. Fraser, M.D. Edin. Dr. Fraser finds that infused beverages, such as tea, coffee, and cocoa, as a rule retard peptic and possibly tryptic digestion of albuminoid food stuffs as compared with the rate of digestion with water as the beverage. There are, however, certain exceptions. Tea and coffee, for example, do not retard the digestion of eggs and salted meats. The active agent in the retardation is chiefly tannic acid in the case of tea and coffee, but in the case of cocoa it is due to the suspended solids. Numerous elaborate tables are given. 2. On the Existence of a Sterno-coracoidal Articulation in a Fœtal Marsupial, by R. Broom, M.D. Glasg. 3. Notes on the Duodenum and the Pylorus, by Thomas Dwight, chiefly dealing with the position, size, and form of these parts as deduced from casts. 4. On Some Points in Comparative Myological Nomenclature, by Professor Bertram, C. A. Windle, of Mason College, Birmingham, and F. G. Parsons, F.R.C.S. Eng., of St. Thomas's Hospital. 5. A Case of an Additional Presacral Vertebra, by Dr. R. J. Gladstone. 6. On the Structure of Cross-striated Muscle and a Suggestion as to the Nature of its Contraction, by W. M'Dougall. In this article the wing muscles of insects and the skeletal muscles of the cray fish are chiefly considered. 7. The Rolandic and Calcarine Fissures: a Study of the Growing Cortex of the Cerebrum, by D. J. Cunningham, F.R.S. 8. Case of Anomalous Kidney and Ureter, by T. W. P. Lawrence. 9. Notes on the Myology of a Negro, by Thomas H. Bryce, M.B. Edin., of Queen Margaret College, Glasgow. 10. Replies to Questions issued by the Anatomical Society of Great Britain and Ireland, by William J. Alexander, M.A. 11. Note on the Dissection of a Third Negro, by Sir William Turner. 12. An Experimental Research upon Cerebro-Cortical, Afferent, and Efferent Tracks, by David Ferrier, F.R.S., and W. A. Turner, M.D. Edin., of King's College. This number contains the completion of the index to Vols. XXI. to XXX.

The *Archives de Médecine Navale et Coloniale* for June contain several interesting contributions, but among them there is nothing *hors ligne*, as our neighbours would say. Dr. Bartet of the *Étoile* leads off with some observations on an infectious disease which he met with at Jeddah in 1895. By the light of subsequent experience he is inclined to think it was Indian relapsing fever, but at the time he believed himself confronted by a new disorder. The paper illustrates the difficulty that is sometimes felt by colonial and naval medical officers in arriving at a correct diagnosis for lack of access to reference libraries. A report on disinfection by means of chloroformol follows; and then, under the head of Practical Surgery, there is a useful paper by Dr. Lassabatie on the necessity for a uniform system of colouration for antiseptic solutions, so that the attendants who are liable to frequent changes of station may not be led into error. According to a tabular statement supplied by the author each naval hospital in France would seem to have its own special colour. Dr. Lassabatie recommends that solutions of corrosive sublimate, carbolic acid, and boracic acid, which are the three microbicide substances generally employed, should be tinted respectively blue, red, and yellow, sterilised water, which is becoming more and more popular every day, alone remaining colourless. Amongst the other papers there is one (illustrated) by Dr. Hercouet on the little known Gilbert Archipelago, which extends on either side of the equator about the centre of Micronesia. These islets are very poor and unproductive, but the writer regrets that his Government failed to establish a protectorate over them when the opportunity offered some time ago. As matters now stand the neighbouring British plantations in Queensland alone derive benefit from the labour of the population, which is estimated at 41,000 persons. The number also contains Notes on a case of Complete Dislocation of the Knee by Muscular Action; a Short Account of a Cure of Snake-bite by means of Dr. Calmette's Serum; a Description of the Effects of Sea-Water on Cast Iron after Prolonged Immersion, by Apothecary Le Naour; and the conclusion of Dr. Neiret's paper on Medical Matters in the Island of Mayotta.

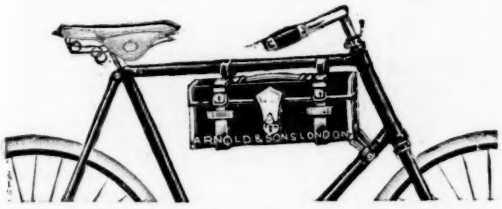
Appleton's Popular Science Monthly. July, 1897.—This number is full of interesting papers. Dr. Shufeldt contributes an attractive paper on "Some Facts about Wasps and Bees." Under the title, "Let us Therewith be Content," Ellen Coit Elliott says some sensible things about "women's sphere." To the questions "Are scorpions matricides and suicides?" Dr. Juan Vilaro replies decidedly in the negative in the first instance and in the affirmative in the second. Professor Charles Ernest Pellew continues his interesting and amusing "History of Alcohol." He comments upon the disastrous results of gin-drinking occasioned by the encouragement given to its manufacture early in William and Mary's reign, when London streets abounded with gin-shops, and one could find placards on them reading "Drunk for a penny; Dead drunk for twopence; Clean straw for nothing"; &c. As is well known, this led to the passing of the famous gin law in 1736, but this did not completely eradicate the mischief, since apothecaries took to selling the stuff duly coloured in small vials, labeled "Colic Water," "Makeshift," and "Ladies' Delight." The writer concludes that the world has at last found out what intoxication means, and the disastrous effects of inebriety have taught a practical lesson which we venture to think has produced a far more salutary result than the fierce and violent, but well-meant, denunciations of teetotal enthusiasts.

The *Dublin Journal of Medical Science* for July leads off with an interesting paper by Mr. C. R. C. Tichborne on the Dissemination of Micro-Organisms and the Best Method of Destroying Germ Emanations from Sewer Gas. After referring to the two methods of germ transmission—namely, the "raft" method, where germs are borne on solid particles floating in the air, as in the desquamation of scarlet fever, and the method in which they are distributed by bubbles bursting on the surface of sewage—he lays down the proposition that sewage ought to be disinfected from the top by a mixture of antiseptics having a lower specific gravity than sewage, and the mixture he advises is made up of crude phenol 1 part, naphthalene ½ a part, and light coal-tar oil 3 parts. When mixed with sewage the tar oils will separate, forming a germicidal pellicle on the surface and trapping any germs sent up by bubbles, while the rest of the mixture will sink through the sewage, purifying it on its way. Dr. A. E. Boyd writes on the Report of the Vaccination Commission. He summarises the facts and conclusions arrived at, and he considers that the weakest part of their recommendations is that regarding revaccination, which he thinks might be made compulsory on school children.

New Inventions.

NEW CYCLE MIDWIFERY BAG.

I HAVE suggested this bag to Messrs. Arnold and Sons, West Smithfield, as I have been unable to find a suitable one in which to carry instruments, &c., when cycling. Although I have planned it for a cyclist's midwifery bag, to be easily adjusted to the cycle even in the dark, it can, however, be



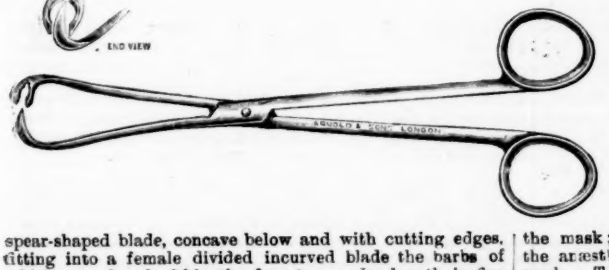
carried in the hand, as the straps are all removeable. It also forms a good useful all-round bag for the practitioner whether cyclist or not. It is of light weight and is made of stiffened water-proofed mail canvas bound with leather. It is carried on the frame of the cycle suspended from the horizontal tube by two detachable leather straps; these are passed through stout india-rubber rings before being attached to the bag in order to safeguard against concussion when passing over rough roads, and as they encircle the bag they give support to its bottom. Another detachable leather strap is attached at one end of the bag near the bottom and passed round the framework to prevent swinging. The bag is fitted with lock and key and a flat leather handle for carrying. Inside it is lined, and as the top is thickly padded and well overlaps the sides, the bag is when closed quite dust-tight. Near the bottom are six lappets of material fastened to the end of the bag. These are to be placed between the instruments. The bag, whilst holding all the usual obstetric instruments, has room for a pocket midwifery case, Higginson's syringe in case, hypodermic syringe in case, and Barnes's bags.

I am much pleased with the manner in which Messrs. Arnold and Sons have carried out my suggestions. The bag is neat, well made, strong, and serviceable, and I have found no harm come to either instruments or bottles, even over rough country roads. It is not in the way when riding, and even when filled its weight is hardly noticeable.

Bedford. JAMES C. CLARK, L.R.C.P. Edin., &c.

A NEW TONSIL FORCEPS.

THIS forceps is designed for use with the bistoury or sickle in removing the tonsils. It consists of a male barbless,



spear-shaped blade, concave below and with cutting edges, fitting into a female divided incurved blade the barbs of which are placed within the fenestrum. Its length is five and a quarter inches, and its end measurement is five-eighths of an inch. Two sizes are made. I claim for it (1) a gripping power greater than that of the forked or toothed volsellum, and that it does not tear through; (2) efficiency in grasping and keeping taut the pedicle of any enlarged growth in a roomy cavity; (3) there is no bar of arrest to its progress, and by keeping the blade of the bistoury close to the convexity of the closed end, there is no danger of wounding other structures or notching the knife, and the growth can be rapidly excised; (4) it can be used either side, and is of service when the guillotine (of which three sizes should always be kept) is objected to; and (5) with a Wingrave's gag and some eucaine both assistant and anæsthetics are unnecessary, and the operation of tonsillotomy is rendered painless and efficient by the use of this instrument and the bistoury. The instrument is made by Messrs. Arnold and Sons, West Smithfield, London.

Ealing, W. HERBERT A. SMITH, M.D. Durh.

A NEW APPARATUS FOR ADMINISTERING ANÆSTHETICS AND OTHER VOLATILE VAPOURS.

THE accompanying illustrations represent several forms of apparatus, designed by Professor Hobday, of the Royal Veterinary College, for the administration of anæsthetics and other volatile vapours, and shown before the members of the Society of Anæsthetists at their meeting in March last. Before being introduced into human practice they were thoroughly and successfully tested on a large number of veterinary patients (including over 400 dogs), in most cases for severe and varied operations, during a period of about two years.

FIG. 1.

Shows the position of the bellows by which a current of air is *sucked* over the surface of the anæsthetic in the bottle, the mixed vapour being passed on into the mask.

The principle of the apparatus in Fig. 1 is to *suck* a current of air over the surface of the anæsthetic and to force a diluted vapour into the mask which is placed on the patient's face; this has been found to work successfully in the case of children, parturition cases, and for prolonged operations where a light degree of anæsthesia is required to be maintained, anæsthesia taking place in most cases quickly and without struggling.

In Fig 2 a current of air is *forced* over the surface of the anæsthetic by means of the bellows, the size of the bottle and amount of surface exposed, together with the pressure exerted on the bellows, influencing the strength of the vapour; and in Fig. 3, which is designed with the idea of saving the trouble of pumping, the same idea (that of forcing a current of air over the anæsthetic) is maintained. In this latter case the pressure exerted by the compressed gas is regulated by a valve on the end of the cylinder, and the amount of vapour admitted can be adjusted as delicately as required by the aid of the tap on the lower part of the mask; one great advantage of this method is that the anæsthetist has both hands free to manipulate the mask. The cylinder method has been tested with both

pressed air and oxygen, and the anæsthetics used in the bottle have been chloroform, ether, and mixtures of these anæsthetics with alcohol. It has also been used with a Junker's bottle when a more concentrated vapour was required.

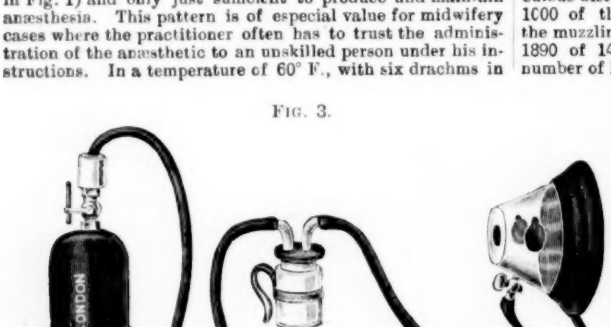
It is needless to say that the strength of the vapour given with Figs. 2 and 3 is greater than that given by Fig. 1.

The chief advantages claimed are: 1. That the chances of overdose are minimised, the amount of anæsthetic used being exceedingly small (especially with the apparatus shown in Fig. 1) and only just sufficient to produce and maintain anæsthesia. This pattern is of especial value for midwifery cases where the practitioner often has to trust the administration of the anæsthetic to an unskilled person under his instructions. In a temperature of 60° F., with six drachms in the bottle, the vapour soaked into the mask contains one part of chloroform well mixed with 4200 parts of air. In the dog, on many occasions, unsuccessful attempts were made to destroy the animal by forcing the bellows as hard as possible for over half an hour, no dangerous symptoms even being manifested. 2. That the supply and strength of the vapour is much more regular and constant when taken from the surface than when proceeding from a current of air forced through an ever-diminishing quantity of fluid such as chloroform. 3. That the anæsthetic is less likely to become oxidised or otherwise changed by the air passing over the surface than if it was constantly passing through it. 4. That there is no fear whatever of irritant or rubefacient effects upon the face of the patient. 5. That by administering the anæsthetic so gradually there is no sensation of choking or other objectionable feeling on the part of the patient.

FIG. 2.

Shows the arrangement of the bellows whereby a current of air is *forced* over the surface of the anæsthetic in the bottle, the mixed vapour being driven into the mask.

FIG. 3.



Shows the arrangement whereby air, oxygen, or other compressed gas contained in the cylinder is made to pass over the surface of the anæsthetic in the bottle without any of the trouble of pumping; the pressure being adjusted by a valve on the cylinder, and the amount of mixed vapour admitted into the mask absolutely controlled by a tap on the latter.

The apparatus can be obtained from Messrs. Arnold and Sons, West Smithfield, E.C. The cylinders can be supplied in any size, from one containing only a few cubic feet to those containing 100 cubic feet or more, the cost of the compressed air being merely nominal.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH OF LIVERPOOL.

DR. HOPE'S Annual Report, recently issued, shows that the area of the city of Liverpool is now twenty and a half square miles, with an estimated population of 641,063. The chief causes of mortality are stated to be zymotic diseases, which accounted for 2311 deaths; constitutional diseases, to which were due 1809 deaths; diseases of the nervous system, causing 1492 deaths; and lung diseases, with a mortality of 3207. Diarrhœa caused 851 deaths, for which, among infants under three months of age, improper feeding was largely responsible, the deaths being fifteen times as numerous as among children naturally fed. The decrease of small-pox is shown by the fact that during the decade 1866–75 the deaths were 236 annually, against 10 annually during the decade 1886–95. The actual death-rate from all forms of tuberculous disease has similarly decreased from 4·3 to 2·9 per 1000 of the population. As regards rabies, the effect of the muzzling order has been the destruction since the year 1890 of 14,757 dogs, mostly worthless and diseased. The number of lodging-houses, of which at the end of the year 1896 there were 635 on the register, with accommodation for 13,585 lodgers, shows a decrease, due to the smaller houses being replaced by larger ones affording better accommodation. The sub-let houses on the register numbered 17,708 and the inspectors charged with their supervision made upwards of 83,000 visits. There were 5705 inspections of canal boats. The scavenging department removed 282,296 tons of refuse from 62,200 ashpits. The report concludes with the remark that "the diminishing rate of mortality effected in past years has been continued in almost every district of the city, and indicates a great diminution in the amount of sickness of a serious character and consequently suffering and loss." The report also deals with the city burial grounds. Interments still take place in eleven burial grounds within the city. As to the effect of these interments on sanitary conditions, Dr. Hope quotes a report of an inspector of the city engineer's department, in which he states that "a large quantity of black jelly was found adhering to the side of the sewer nearest the necropolis; the other side was of the natural colour of the rock. When this material was touched or pricked it emitted a frightful stench. The opinion of the other men and myself was that it came from the burial ground. One of the men at work was taken seriously ill and died while the work was in progress." The medical officer advocates the closing of all these burial grounds.

REFUSING TO DISINFECT AT BARRY.—On July 12th, at the Barry police-court, the agent of a house in which a case of small-pox had occurred was summoned by the Barry Urban District Council for refusing to disinfect the premises. The inspector stated that he served defendant with notice to disinfect on the 23rd ult., but he refused to comply. The magistrates fined the defendent 8*s*., the cost of the work done, and ordered him to pay the costs of the case.

THE CASE OF LEPROSY AT UPWEY, NEAR DORCHESTER.—Mr. Joseph Chamberlain, M.P., has interested himself in the case of leprosy at Upwey. The boy came with his parents from Singapore, where he is supposed to have contracted the disease. Mr. Chamberlain sent an expert to examine the boy, and on his report the Colonial Department has granted a pension of £15 to the unfortunate lad.

THE LANCET.

LONDON: SATURDAY, JULY 24, 1897.

THE Royal College of Physicians of London has enjoyed during its long career considerable Court favour. Instituted by HENRY VIII. "with a view to the improvement and more orderly exercise of the art of physic and the repression of irregular, unlearned, and incompetent practitioners of that faculty," the first President of the College appointed by the Royal Founder was his own body-physician and personal friend, THOMAS LINACRE. The association of the Court with the College, thus initiated, has been ratified many times in a striking manner by different sovereigns, as all can read by consulting the earlier biographical sketches in Dr. MUNK'S "Roll Call of the Royal College of Physicians"; and has now received its latest and most interesting confirmation by the gracious action of H.R.H. the PRINCE OF WALES in permitting himself to be enrolled as an Honorary Fellow. It had been an open secret in medical circles for some weeks that His Royal Highness might soon be expected to become a member of our profession by accepting a diploma from the College, and on Monday last the expected event became an accomplished fact when the PRINCE was admitted at Marlborough House to the Honorary Fellowship of the College in the presence of the President, Censors, Treasurer, and Registrar of the ancient and dignified corporation.

That members of the medical profession will regard this occurrence in more ways than one we have, however, reason to know, so that a few words explanatory of the significance of the event will not, we trust, be out of place. To some the granting of a purely honorary medical title will seem ridiculous, on whomsoever it is bestowed, if the recipient of the distinction has had no medical training and boasts no medical knowledge. These will hold, and with perfect loyalty in their freedom of thought, that, inasmuch as His Royal Highness cannot possibly know the elements of medicine, to make him a *socius compar* of the learned Fellows of the Royal College of Physicians of London is an idle and unsuitable compliment. The PRINCE OF WALES, they may say, is a practical soldier and expert sailor, so that there is a fitness about his Service titles which does not pertain in the case of his medical diploma. This view, although correct in a sense, gives a false picture of His Royal Highness's position. He is, it is true, a well-instructed military man, and although it is only the ritual of the military life with which he is familiar he is in possession of knowledge equipping him for high station in the Army, while hereditary bent and the necessary environment of the Courts of Europe have all combined to make this knowledge simple for him to comprehend and easy for him to apply. In a similar manner the PRINCE OF WALES is prepared for great offices in the Navy. We do not imply that he could command our fleet, but we more than imply that he could distinguish between good and bad naval policy and between efficient and inefficient nautical measures. But the facts—and this is the point—that the *bâton* of the Field Marshal and the uniform of the Admiral are not without their appropriateness to His Royal Highness's individuality, though true in the main, are quite by-the-bye. Nobody supposes that in actual war the PRINCE OF WALES could, if he were permitted to make the attempt, command our forces by land or sea. Everyone knows—and he as certainly as the rest of us—that he would be unable to meet the responsibilities, exactly as he would be unable to give a name to a nervous disease. He may know more of the elements of strategy than of physic, but his position in a campaign against disease is comparable for all practical purposes to the one he would occupy against an invading army.

The right way to regard the honorary titles of the PRINCE OF WALES is so clear that we are surprised to find that there should be any obscurity in the matter. He is the representative of HER MAJESTY THE QUEEN, who is the Fountain of Honour, and as such it is germane to his position that he should enjoy high official status in all our institutions—in our great departments and no less in our professional corporations. The Army and Navy fill places in our Constitution which no profession aspires to fill, but the professions have a claim upon the personal attention of the Crown which cannot be denied, and which the PRINCE OF WALES has always shown himself prompt to admit. The PRINCE OF WALES has done more than cement an historic friendship between the College and the Crown by his acceptance of an honorary diploma—much more. In his compliment to the College may be seen a pleasing recognition of the whole profession of medicine. We may interpret the event as meaning that the Heir-apparent, desiring to associate himself with all that is best, all that is most useful, and all that is most healthily progressive in the country, has designed to acknowledge the place of medicine in his comprehensive programme by consenting to become a Fellow of the Royal College of Physicians of London.

WE have striven to keep our readers *au courant* with the rise and progress of the epidemic of plague that has prevailed in certain parts of India, and we have also frequently alluded to the disasters by which that country has been afflicted in the shape of famine and quite recently earthquake. There has also been, in addition to the evils of pestilence and famine, a spirit of unrest among the natives which has manifested itself at Calcutta and at Poona. There is no evidence to prove that these two occurrences were directly connected with one another. The disturbances at Chitpur and Calcutta, of a kind not infrequent in India, arose from politico-religious causes, and the tragedies at Poona are supposed to have been connected with, and attributable to, the unpopularity of the measures adopted, and successfully adopted, for the repression of plague. The feeling against the authorities in this respect seems to have been greatly excited and fomented by the disaffected Mahratta press. All the evidence points to the murderous outrages at Poona having been the outcome of

a political conspiracy which had been long incubating, and in which a great many natives were involved, and quite probably the native police also. The opposition to the plague suppression measures and the false statements that had been spread abroad in regard to them simply afforded an occasion, however, for letting loose the passions of disaffected people. Still, looked at from any point of view, there is evidence of a spirit of unrest among portions of the native communities in India which cannot be entirely disregarded, although we do not in the least believe that there is any feeling of enmity to, or discontent with, our rule in India among the native population generally. It is easy to understand, of course, that there must be a conflict, whenever they come together, between Eastern ignorance, caste-traditions, and prejudices, and the methods adopted by modern Western civilisation—however carefully and considerately carried out—in regard to sanitation and the repression of epidemic disease. The natives of India are not, as we know, from examples in our own country, peculiar in their opposition and resistance to hygienic measures. But we are glad to learn that the recent crimes in Poona probably had not their roots altogether in this soil of enmity and prejudice, but in other sources of disaffection of a political kind.

The official and medical reports and modern literature regarding plague at Hong-Kong and India are becoming so voluminous that it is not easy to keep pace with them. We have before us an excellent report on the Prevalence of Bubonic Plague in the Colony of Hong-Kong during the years 1895 and 1896, by J. M. ATKINSON, M.B. Lond., D.P.H. Camb., Acting Colonial Surgeon; the report of the Commission sent by the Egyptian Government to Bombay to study plague, with a capital descriptive introduction from the standpoint of the practical sanitarian, by Dr. J. G. ROGERS PASHA, the Director-General of the Sanitary Department at Cairo, followed by observations of a scientific and technical kind on the nature and propagation of the plague, its cause, with the general symptoms and the clinical, pathological, and bacteriological features of the three forms of the disease encountered, by Dr. H. BITTER, the Director of the Institute of Hygiene, Cairo; and the Experiences and Lessons of the Bombay Plague, by THOMAS BLANEY, reprinted from the *Times of India*, dealing with the scourge from an epidemiological and public health point of view in relation to the three stages of its course as seen in Bombay—its initial or spreading stage, its second or stage of general spread, and its third or declining stage, as well as other papers and pamphlets. We have only time at present to glance at these sufficiently to extract and indicate their titles and nature. A Reuter's telegram from Berlin giving the results of the Commission under the direction of Professor KOCH has also just been published. Professor KOCH'S report states that the plague bacillus outside the human body or those of certain animals has very brief vitality. The duration of the life of the bacillus was found to be from eight to ten days at the most. The bacilli do not develop without the influence of atmospheric oxygen. Experiments on animals showed various results. Rats were found to be in the highest degree susceptible, and to be spreading the plague germs and communicating them to human beings. The Commission observed only isolated cases of illness among people camping in the open, while among those who had remained indoors the epidemic continued its ravages without abatement. Professor HAFFKINE'S system of inoculation, which was applied to 1400 patients, showed undoubted protective results, although a number of the patients were, it is stated, taken ill in consequence of the inoculation.

IT is a source of peculiar satisfaction to ourselves that greater attention is now paid to the sanitary condition of the river at Henley during the regatta week. There is, however, still room for improvement; but we believe—and there is visual evidence to that effect—that the worst sources of evil are, as far as possible, removed. It was during the regatta in 1886 that a LANCET Commission[1] conducted a practical inquiry on the spot, and the results of its investigations were by no means assuring. They led, however, to the framing of by-laws, which received the Royal assent in 1887, to the enforcement of which we attribute the improved appearance of the river now evident to everybody. These by-laws were framed to provide against the pollution of the river by sewage and other refuse occasioned by the sojourn of house-boats extending in an unbroken chain for almost a mile in length along the course. It must not be forgotten that the regatta at Henley attracts visitors from almost all parts of the world, and this may occur at a time when cholera is rampant in some parts; and the result of choleraic dejecta being thrown into the river might be the means of disseminating a disastrous epidemic amongst London water consumers. The intakes of the companies supplying London are not a very great distance below the Henley Reach, and at the annual regatta there are hundreds of persons housed on the river whose sanitary wants must of necessity be attended to. The Conservancy apparently kept a sharp look-out on the householders on the bank to prevent them from fouling the river in an open way, but it was obviously absurd and unfair to enforce this step when people living in house-boats for over a week on the spot were considered exempt from a similar enforcement. As we have said, the condition of the river, judging from last week's regatta, is still not entirely free from reproach, and we do not see why the regulations should not be made so rigorous as to stop all unnecessary disposal of refuse into the river. The nooks all along the course were full of pieces of bread, cucumber, tomato, disintegrated salads, and other débris which had at one time been succulent. If people throw these things into the river, wrongly regarding it as a proper receptacle for all kinds of rubbish, they will cast anything else into it without the slightest attempt at discrimination. And we fear it is possible that even human excreta are thus disposed of in contravention of those by-laws which our own inquiries aided in getting framed and enforced. One excellent plan which has been adopted is the attendance of a scavenging barge to collect the slops and dejecta early in the morning and to dispose of them on a comparatively remote piece of ground.

[1] THE LANCET Commission on Henley Regatta, THE LANCET, vol. i., 1886, p. 142; THE LANCET, vol. ii., 1886, p. 175; THE LANCET, vol. i., 1887, pp. 1254 and 1294; THE LANCET, vol. ii., 1887, pp. 28 and 84; THE LANCET, vol. ii., 1888, p. 84.

We should like to see this regulation supplemented by an an arrangement for collecting the innumerable floating bottles and items of waste food which accumulate in enormous quantities in the various havens along the course. These are a source of nuisance, not perhaps of the same intensity as human dejecta, but still easily removable. At any rate, the decomposing vegetable matters could be collected without much trouble, since, as a rule, they are located by the eddies of the stream. Such refuse certainly detracts from the beauty of the river. A similar complaint holds good with regard to racecourses and picnic grounds such as Epping Forest, where the visitors, utterly regardless of the comfort of others, cast corks, empty bottles, papers, and the fragments of an abandoned lunch in all directions. Such a disregard for clean and tidy manners may not be so serious a matter as the actual befoulment of a river with human excreta, but in one sense what is displeasing to the eye is objectionable equally with what is offensive to the nose. We do not know whether it is possible to trace the effects of the Henley week upon the purity of the water running down to the intakes below, but the rate of flow being known, and consequently the approximate time when such water is drawn by the companies, it would be interesting to observe the differences, if any, in regard to the quality of the water supplied to the metropolis during that period. It may reasonably be anticipated that a material increase would take place in the amounts of organic carbon and nitrogen, and *pari passu* the brown colour would exist in much greater relation to the blue, which is the normal colour of pure water.

THE Council of the Royal College of Surgeons of England at its last meeting repeated the expression of its inability to question the legality of the conduct of those of its Fellows or Members who accept the posts of medical officers of Medical Aid Associations and to endorse the refusal of any Fellow or Member to meet in consultation (particularly in urgent cases) registered practitioners if acting in conformity with their legal rights. This *non possumus* position of the College must be taken into serious consideration by the profession. The College is the disciplinary authority of the greatest number of the practitioners of the country. It has charge, not only of the major morals of its members, but, in a sense, of those minor professional morals which Sir JOHN SIMON said the General Medical Council could not undertake to regulate. It has powers of remonstrance and censure which in a large number of cases it is quite sufficient to use without proceeding to extremities. But, even so, it does not see its way to question the legality of conduct which on a large scale is lowering the public estimate of medical science and medical service. When medical men undertake the care of patients in such numbers as are inconsistent with due attention to individual cases, and when crowds of patients are gathered into monster associations by a system of touting which sweeps in thousands who are quite able to pay the ordinary charges of medical men, and which is grossly unfair to private medical men, we might have thought that a case had arisen for the exercise of the minor degrees of discipline of the Royal College of Surgeons and of its sister corporations. But the Council of the College has decided otherwise, and declares *non possumus*.

We need not suppose that the Council was unanimous in this finding. It may well be that opinion was divided on the subject, and that a little more importunity or the presentation of particular facts in some given case may suffice to move the majority of the Council to more activity and to more courage in the assertion of its disciplinary powers, given for the very purpose of upholding the methods of the profession and the essential conditions of honourable and successful practice. Another very important fact for the profession to notice, and especially those members of it who live in places where the working of medical aid associations and other such-like combinations do so much harm, is that the Royal College of Surgeons is only acting in this matter like all the other medical authorities. They all with one consent make excuse of one sort or another for doing nothing. The Royal College of Physicians of Ireland has expressed a pious opinion that its Members and Licentiates ought not to accept office in such associations. But it has gone no further. The reasons for such inaction and timidity are subjects for speculation. Perhaps the bodies which express them are acting on legal advice, though it is certain that if lawyers saw their profession degraded by such methods and systems they would undoubtedly find means within the domestic courts of their profession to check and control them. There have been some very gross cases of "touting" by associations which clearly violated all the rules that medical men in their personal capacity observe towards each other as well as the spirit and letter of the by-laws of the Colleges touching unprofessional methods of practice. One chief part of the explanation is an indisposition, as it were, on the part of the corporations to undergo the trouble and the expense of using their disciplinary powers, and a desire to throw such trouble and expense on the General Medical Council, which has no mandate to deal with professional misconduct short of that which is "infamous," and which has only one punishment—that of removal from the Register. Clearly the framers of the Medical Act in so restricting the disciplinary powers of the General Medical Council never contemplated relieving the qualifying bodies of their proper duties towards their members.

All this is very obvious. The situation is serious. The profession is left without any help from its authorities, and medical officers of medical aid associations may well retort on their accusers and say: "You see we are doing nothing that the bodies which gave us our diplomas disapprove or find illegal." It may be said that there is no more to be done. Let things drift, and let each man do what seems right in his own eyes. We do not take that view. We would urge the profession to organise itself in every important town and centre, and to assert itself. Combination in the trade-union form of "striking" is not, perhaps, to be commended. But there is such a thing as the public opinion of the profession, and we have great faith in that if temperately expressed and asserted. We are quite at one with the Royal College of Surgeons in thinking that, in urgent cases at least, consultation should not be denied. But, short of the extreme course of denying consultation, much may be done

to make the medical officers of these associations feel that they are acting selfishly and contrary to the interests alike of the public and the profession. The profession must save itself and show itself superior to the corporations, which act too much as if they had no interest in the profession further than to submit students to examination and to receive their fees. The profession will err deeply if it depends on either the General Medical Council or the medical corporations. It must in every district assert itself in strictly professional ways. One way that has, perhaps, not been tried quite so much as it should have been is that of treating directly with the leaders of the associations which are acting with such a high hand and with so little apparent generosity towards the profession. We do not share in all the sentiments that are expressed about working under a working-man's committee. Working men are not naturally ungenerous or ill-disposed towards the profession. They are amenable to reason and to argument. And we should advise in such centres as Portsmouth, Norwich, and Beckenham further attempts to treat directly with the associations themselves.

Annotations.

"Ne quid nimis."

UNHEALTHY PAUPER CHILDREN.

WE have already referred at some length to the important subject of the disposal of pauper children suffering from ophthalmia, ringworm, and other contagious diseases, and such as are suffering from some mental or bodily defect.[1] An order was issued on April 2nd, 1897, by the Local Government Board placing the several classes of pauper children referred to under the care of the Metropolitan Asylums Board. The last-named authority has set to work with laudable promptitude, and has just received a report from a special committee appointed for that purpose. Considerable difficulty has been experienced in arriving at approximate numbers of the several classes for which the Board will have to provide, but the urgent necessity for some change of the kind now taking place is apparent from the figures given, which for obvious reasons are probably under- rather than over-estimated. At the present time it is reckoned that provision will have to be made for about 800 cases of ophthalmia, 400 cases of ringworm and contagious diseases of the skin, approximately 360 children showing some mental or physical defect, about 150 children remanded under a magistrate's order (Industrial Schools Act, 1866), and an unknown number of children requiring "convalescent" treatment—a total, excluding the latter, which amounts to 1710 children. It is proposed to take over and utilise existing institutions as far as possible, with the important provision that the existing cubic space shall be revised. We notice with pleasure that it is proposed to deal with mentally and physically deficient children quite apart from the others, and under the care of foster-mothers, in batches of about eight each. A special point is also wisely made in the report that in all cases such education as these several classes are capable of receiving shall be given to them; moreover they shall also be under medical treatment. We notice with some regret, on the other hand, that no recommendation is made as to the appointment of any medical inspector. Without competent medical inspectors, of whom one might perhaps be a woman, this scheme, which otherwise promises so well, will fail as surely as did the old system.

[1] THE LANCET, May 1st and 8th, 1897.

EGYPTIAN ANATOMICAL NOMENCLATURE.

M. VICTOR LORET, of Lyons, has recently succeeded in determining the true signification of two anatomical terms used in the most celebrated of ancient Egyptian medical papyri—that which is known by the name of its owner, Dr. Ebers. M. Loret has been enabled to succeed because of the large number of new texts of Egyptian writings, both upon monuments and manuscripts, that are now annually published. These two terms, which are among the very few in the papyrus which were still imperfectly understood, are those for groin and perineum. The former word had been recognised by Professor Stern in his "Glossary of the Ebers Papyrus," but he assigned no reason for its meaning, and the matter had been deemed unproven. M. Loret quotes some twelve texts corroborative of the conclusion and the matter is now beyond doubt. The other hieroglyphs denoting perineum have been deciphered by means of the contents of a magical papyrus in the Vatican, recently edited by Dr. Erman. This manuscript gives a series of incantation formulæ appertaining to every member and portion of the body, commencing with the head and terminating with the feet, the order being strictly preserved. The title for the perineum is placed in the list in the following succession: "dorsal vertebræ, anus, perineum, viril member, thighs." In conclusion, a hope may be expressed that among the thousands of Greek papyri discovered last winter in Egypt some translations of old Egyptian medical records may be found and thus render superfluous the time and learning hitherto expended in laboriously wresting the secrets of the ancient hieroglyphic writing.

THE CONSTITUTION OF DEAD AND LIVING PROTEID.

IT is simple enough by the ordinary process of permutation to suggest different constitutional structures of complex substances, but it is more satisfactory if the formulæ so derived are found to stand the test of investigation. There is not a more complicated substance than albumin or the proteid constituents which play so important a part in the human economy. Their percentage composition is easy enough to establish, but their exact constitution is another matter. It is comparable to the difference existing between the substance or bricks of a building and the architecture or structural form it exhibits when the bricks are placed in position. Chemically analogous examples afford a strong line of deduction in throwing light upon the constitution of complex substances, and Dr. P. W. Latham, of Cambridge, in a Croonian Lecture in 1886, based his arguments on the constitution of dead and living proteid on some simpler types of chemical change. He assumed that the action of the liver on the amido bodies, glycocoll, taurine, leucine, tyrosine, &c., is one of dehydration similar to that by which glycogen is produced by the dehydration of glucose. Again, in accordance with Pflüger's view, ammonium cyanate is the type of living and urea of dead nitrogen, the conversion of the former into the latter being an image of the essential change which takes place when a living proteid dies. Further, in many of the cyanogen compounds condensation of three molecules take splace, forming compounds much more stable than those consisting of one molecule only, such as is exemplified in cyanuric acid, which results from the condensation of three molecules of cyanic acid. Dead albumin may be built up on the evidence furnished on the lines here suggested. The change from the dead to living albumin may be similarly supposed to take lace as from urea into ammonium cyanate. Dr. Latham

proceeds to adduce evidence explanatory of the changes which take place as the living proteid dies. His latest conclusions are as follows: (1) that living proteid consists of a series of cyan-alcohols with one thio-alcohol united to a benzine nucleus; (2) that when a proteid dies it gives off carbonic and lactic acid, the thio-alcohol by oxidation being converted into a sulphonate which combines with ammonia, and by the conversion of CNOH into NH = CO the cyan-alcohols are changed into a series of amido bodies; (3) that by condensation of the lower cyan-alcohol and the separation of CNOH the higher cyan-alcohols are formed; and (4) that urea is formed by the separation of carbamic anhydride (CO = NH), which either combines with ammonia to form urea or is hydrated to form carbonic acid and ammonia.

SPORADIC INFLUENZA.

DR. OTTO LINDENTHAL, of the Vienna Pathological Institute, who has had an opportunity of examining eight cases of fatal influenza-pneumonia, contributed an interesting paper recently to the *Wiener Klinische Wochenschrift*.[1] He believes that during periods when there is no influenza epidemic the microbe which is the cause of it passes from one individual to another, producing sporadic cases which are indistinguishable, clinically and bacteriologically, from the regular affection as met with in epidemics. The microbe does not multiply in the air or ground or even in water, but seems to require the body tissues and secretions as a medium. He finds that the pleuritic effusion in influenza is not always purulent, but may be croupous, serous, or even sanguineous; also that the nasal inflammation can be, and perhaps always is, due to the influenza bacillus alone, but that very frequently the pneumonia coccus and other pyogenic microbes are associated with it. The influenza bacillus varies a great deal in size and shape from the smallest coccus-like rod to bacilli as large as those of diphtheria. All forms, however, retain their characteristic properties—difficulty of staining, immobility, refusal to take the Gram stain, special development in hæmoglobin, and deficient development at summer temperature or when deprived of oxygen. The colonies are at first developed in an arched or semi-spherical form and are homogeneous and transparent, and when allowed to grow freely have a friable appearance in the centre, afterwards becoming less arched and bluish when seen by transmitted light, or even so dark that they lose their translucency. As to the so-called pseudo-influenza bacillus which has been described, Dr. Lindenthal does not appear to believe in its existence.

MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE additions to the Museum of the College during the past twelve months include many specimens of great interest and importance. Among the pathological specimens may be mentioned the scalp of a Chinaman which had been torn off owing to the pigtail having become entangled in some machinery (presented by Mr. Stanley Boyd); three very interesting specimens of diffuse sarcoma (lymphadenomatosis) of the sternum, ribs, and spinal column (the bones are extensively invaded by the new growth); a specimen of the sac of an obturator hernia, and one showing the partial enterocele which had been contained in it. Mr. D'Arcy Power has presented six specimens which illustrate the pathology of experimental intussusception. A very good specimen of dissecting aneurysm of the aorta was presented by St. Bartholomew's Hospital, and Mr. J. Tweedy and Mr. C. D. Marshall have given fifteen specimens exhibiting various macroscopic lesions of the eye. A very good example of a conical stump is shown; the bone projects about three inches beyond the muscles, but is covered with skin; it was removed from a boy, fifteen years old, who had had his arm amputated nine years previously. Among the teratological additions two specimens are especially worthy of note; one was a case of complete ectopia cordis, the heart lying uncovered on the surface of the thorax, yet the child lived some hours; the other specimen was presented by Mr. Bilton Pollard; it is a diverticulum of the ileum, which was contained in the sac of a congenital umbilical hernia; it measures nearly three feet in length, and was attached about five feet and a half above the ileo-cæcal valve. In the physiological series fourteen specimens illustrating elastic structures have been added, the tunica abdominalis of the horse and elastic spinal ligaments of several animals being especially well shown. Then follows a large group of specimens illustrating the varieties of joints; these are divided into (1) joints without known function, mostly the result of periodicity in rate or nature of growth; these are illustrated by specimens of the jointed branches of some euphorbiæ; (2) joints which are points of development of organs, separated by internodes that effect the necessary elongation, well shown in an equisetum; (3) joints that allow of continuous growth (the best examples of this form are the "shell" of an echinus, the separate plates of which it is composed having been taken apart), and the carapace and plastron of a tortoise; (4) joints that by allowing motion diminish the risk of fracture; in a multi-nucleate calcareous alga (cymopolia barbata) the branches have flexible nodes alternating with brittle calcareous internodes, and in a bryozoan (membranipora membranacea) encrusting a seaweed the calcareous lateral walls of each zoœcium are interrupted in certain places by flexible areas that allow the bryozoan to adapt itself to the movements of the seaweed; and (5) joints that allow of voluntary motion, as in the chelæ of a lobster (homarus vulgaris) and in the joints of vertebrates. Many other specimens might be mentioned, but we have space for a few only: several most exquisite dissections of the nervous systems of a scorpion, a cuttlefish, and other invertebrates, and a skeleton of a snake (dasypeltis scabra) which feeds on eggs that it swallows whole, the shell being afterwards broken in the throat by the sawing action of thirty-two tooth-like processes borne on the anterior vertebræ. Professor Stewart and Mr. Targett are to be congratulated on the excellent specimens which have been added to the Museum, and great praise is due to the anatomical assistant, Mr. R. H. Burne, for the numerous careful dissections which he has made.

THE HOXNE DISTRICT COUNCIL AND THE NOTIFICATION ACT.

THE Hoxne District Council have some curious notions as to the duties of medical officers of health. The chairman of the council has evidently been under the impression that it was a necessary part of the duty of a medical officer of health to visit and see each patient concerning whom he had received a notification certificate; but, having been to headquarters in London to ascertain whether he was right, he announced at a recent meeting of the council that there was no such compulsory duty on the part of the medical officer of health. We have explained again and again that the responsibility of visiting or not visiting premises on which there is infectious disease rests with the health officer and with no one else. He is the judge as to whether such a visit is necessary. It would, indeed, be absolutely impossible for medical officers of health in London and other large towns or in combined districts to make such visits in all cases, even if their authorities supplied them with

[1] Wiener Klinische Wochenschrift, No. 17, quoted in the Allgemeine Medicinische Central-Zeitung, No. 57, 1897.

unlimited means for travelling in the swiftest manner possible. Besides which, ten cases of scarlet fever—or of measles where notifiable—may not in one case call for a personal visit, whereas one single case of scarlet fever at a dairy, or of typhus fever in an ordinary town, would probably call for an immediate visit. The question is one for medical judgment, and this has been explained clearly by the Local Government Board. But the chairman and others referred also to visiting the "patient." As a general rule, this is absolutely unnecessary and altogether uncalled for. The medical officer of health is bound to act on the diagnosis formed by the certifier unless he has ground for suspecting fraud or unless some imminent danger to the district is involved. Visits by medical officers of health to patients of other practitioners have been officially denounced as unjustifiable except under the circumstances named; and even where they have to be paid, any such visit should only be made after communication with, and in conjunction with, the medical practitioner in attendance on the case. In 1895 we dealt in a series of articles (which have since been issued in pamphlet form) with all the various "Difficulties under the Infectious Disease (Notification) Act" which had been met with by medical officers of health and sanitary authorities, and we quoted at length a large number of decisions that had from time to time been given by the Local Government Board on the various questions that had been submitted to them in this matter. We cannot help thinking that if this *résumé* of difficulties and official decisions on them were better known there would be fewer instances of "allegations" against medical officers of health either as to excess of duty or failure of duty on their part. It behoves district councils like that of Hoxne to learn their powers and the duties of their officers before casting blame; and there are few points in which decisions have been more clearly enunciated than those which have, in this instance, led the Hoxne District Council into a wrong and altogether untenable position.

HIGH TENSION AND HIGH ALTITUDES.

A HOLIDAY contributor writes from Andermatt, Switzerland, on the 17th inst.:—"Alpine misadventure is a wide word and is made to include victims to pathological conditions unrecognised by the victims themselves, whose sudden fall into a crevasse or mountain torrent is set down to 'loss of balance,' 'misplaced footing,' or one or other of the many mishaps besetting the mountaineer, when syncope due to cardiac lesion was the real cause. In August, 1894, THE LANCET pointed out this 'error in classification' when Baron Paccoy, who had for two days been acting as guide to the Queen of Italy, stumbled and fell into a crevasse on the Lyskamm, not, as was at first thought, by inadvertence in walking, but by instantaneous heart failure occurring at the dangerous spot in question. May not this account for the strange disappearance of Mr. Cooper at Zermatt, now being investigated at the instance of our Foreign Office by the cantonal authorities? May he not have fallen into the Visp when suddenly overtaken by the syncope not unusual in a septuagenarian beside a rushing, brawling mountain stream? The hypothesis is well worth entertaining, strengthened as it is by the circumstances under which, on Sunday, the 11th inst., the burgomeister of a Westphalian town met his death on the Furka Pass. This gentleman, with his wife and a young Italian officer as *compagnon de voyage*, left Andermatt on the morning of that day for the Rhone Glacier. Everything went well till they came within sight of the object of their journey, when the burgomeister, rising in the carriage to get a better view, had barely uttered, 'Oh! C'est magnifique!' when he dropped down dead. The great altitude, the rarefied air, the high tension — conditions inseparable from Alpine ascents—were too much for a 'chronic sufferer from weak heart,' and he collapsed accordingly. Now, had this syncope occurred at a difficult spot of the Rhone glacier itself, had it supervened on the edge of a crevasse into which the victim fell, would not the incident have been classified as 'accident due to misadventure'—to one or other of the merely pedestrian risks encountered by every Alpine climber? The whole question opens up a series of considerations very gravely present to the Swiss medical faculty, in view of the multiplication of such engineering enterprises as the Jungfrau Railway, for example, which will shortly be 'ballooning' passengers of all ages and bodily conditions to a height of over 12,000 feet above the sea level. At a congress of the said faculty, held some time ago at Arona, the perils and the precautions incidental to such railway development were fully discussed, and an impressive warning was given to the travelling public not to venture on rapid ascents above the snow-line without previous sanction on the physician's part. To no section of that public is the warning more immediately addressed than to the British, who, after the exhaustion of the London season or a nine months' spell of work, professional or other, are found thronging every Swiss mountain inn, and in sheer holiday exultation qualifying by every kind of imprudence for some such fate as comes under the all too elastic heading of 'Alpine misadventure.'"

UNNECESSARY STREET NOISES IN AMERICA.

EFFORTS are being made in New York and in some other large cities in the United States to prevent as far as possible the unnecessary street noises. All over the world street noises in the large towns are a nuisance as well as a serious menace to health. Some of the noise must be endured as a necessary evil, but a great part of it might be easily abolished by judicious legislation, and to the lasting benefit of the general public. The worst feature of the case is that it is not only in the day time that the pandemonium is rampant; but at night too, when the nervous system absolutely requires rest, it is often almost impossible in a large city to obtain undisturbed repose. The matter is a serious one and will sooner or later have to be gravely considered. The noises prevailing by day and by night in New York are almost beyond belief. Englishmen are rightly prone to think that London is a noisy place, but compared with New York the American, we believe, looks upon London as a village. The noises in New York have a peculiarly jarring, irritating effect on the nerves; the booming rumble of the cable cars, the metallic rattle of the trains on the elevated railway, the jolting of the carts and heavy traffic over the rough, uneven roadways, the continual sounding of the gongs on the cars, the ringing of the bells attached to hucksters' carts,—all these combine to make up an aggregation of sounds which, happily, can be equalled in no part of London. In all large towns unnecessary street noises of any description should be sternly repressed. It seems absurd in these days of high pressure that to the unavoidable sounds should be added those which might be stamped out without doing harm to anyone.

MILK LEFT ON THE DOORSTEP: A SERIOUS POSSIBILITY.

ONE of the most curious early-morning sights in residential London is the innumerable cans of milk left on the doorsteps, or hung upon the railings, or upon the door-knobs, awaiting the advent of the domestic to take them inside in readiness for breakfast. Of course, it is done because the milkman calls at an inconveniently early hour, but the system has its decided disadvantages, not to say grave dangers. A case was reported at the Marlborough-street Police-court this week in which a man was charged with stealing two quarts of milk from outside a house in

Shaftesbury-avenue. The temptation to a famished man in the early hours of the morning, when he finds excellent food placed at the street-doors on every side, is indeed great, and so the magistrate thought, and taking that into account he sentenced the man to fourteen days' hard labour. This case prompts us to quote an instance known to ourselves in which the milk left in a can on a doorstep had been actually tampered with. Some maliciously disposed person had opened the lid and dropped inside a vermin-killing powder containing strychnine. Fortunately it was noticed that there was something wrong with the milk by the appearance of a blue powder in it, otherwise the consequences might have been very grave indeed, and with little chance of tracing the villain. We hardly like to suggest that there are miscreants amongst us who would be guilty of committing such a heinous offence, but the ease with which it obviously can be done, and was done in this case, should be a serious warning to the public to effectually prevent any such possibility. Milk consumers should insist on their milk cans being sealed, and should reject the early morning milk if it be found that the seal is broken.

MULTIPLE MELANOTIC SARCOMATA RESULTING FROM A MOLE.

The following case has recently been published by Dr. D. Grant.[1] The patient was a muscular, exceptionally healthy man, aged twenty-seven years. He had a black mole on the right arm ever since birth. Three years ago it was torn by the horn of a sheep and soon healed. Some time afterwards he injured it again, and it spread to the size of a finger-tip. A year after the first injury he showed it to a medical man, who thought little of it. Six months later he bruised it again. Healing did not take place readily, and a few satellites appeared. Another medical man excised the whole affected area of skin. Five months later a lump appeared in the axilla which was promptly excised. However, a large number of secondary growths appeared. The surface of the body was thickly sprinkled with melanotic growths, varying in size, depth, and colour, and a much larger number could be detected by touch. The whole skin of the trunk was thickly infiltrated with minute growths. This case, unfortunately, is a type of all. That melanosis may result from a mole is but a commonplace doctrine; yet in no case has free excision be resorted to in the first instance. The reason is that the first changes—increase in size or ulceration—appear trifling. The nature of the disease is recognised too late—when secondary growths have appeared. How many more such cases must occur before it becomes generally realised that a mole is a potential sarcoma and should be promptly and freely excised on showing the slightest activity?

RAILWAY NOISE AND VIBRATION AND THEIR EFFECT UPON HEALTH.

VIBRATION and noise are factors well known not only as producing temporary discomfort but also injurious effects upon the health. In these days when travelling rapidly from place to place is a *sine quâ non* both causes of disturbance are to some extent inevitable, but we cannot help thinking that much more might be done to alleviate the distress arising from our incessant recourse to the many and various means of moving from place to place. Speed is the craze, but there is no reason why speed should not be attained without the discomfort due to noise and rapid vibration, not to mention the, perhaps, permanently ill-effects which a constant series of joltings may have upon the nervous passenger and invalid. The various railways running out of London afford a good illustration of what is, and what is not, done in this direction. Passengers, for example, cannot fail to have noticed how smooth and free from vibration is the travelling on the Great Western Railway. On the London and North-Western and the Midland Railways it is still good from this point of view, but not quite so free from shock and noise. The trains of the former company running on the Underground Railway are, however, excellent examples of smooth and comfortable travelling. The trains running south create, as a rule, an endless clatter, so that on these lines a journey, say of fifty miles, produces as much distress and fatigue as a journey of over 300 miles north by the east and west coast and the Midland routes. It is fair to add, however, that the London and South Western Railway has of late years considerably reduced the amount of shaking which passengers on this line were wont to experience. The Great Eastern Railway, though well to the fore in enterprise, is, perhaps, one of the worst from the point of view of a rattling, shaking, and noisy journey. These differences are, of course, easily explained on engineering grounds. The character of the "run" is dependent upon the degree of perfection of the rolling stock and the track. What we should like to know is why the same standard of smoothness and regularity in both these engineering details cannot be adopted by all companies alike. The question is not one that affects the interests of the passengers only, because surely the more smoothly a train runs over the metals the less must be the wear and tear to both the train and the track. It will be generally conceded that every effort should be made to minimise the ill-effects which travelling at a high speed is apt to induce.

[1] Intercolonial Medical Journal of Australia, May 20th, 1897.

HOT WEATHER IN NEW YORK CITY.

THE weather in New York is said to have been the hottest on record for the first week in July. Heat makes itself felt in a peculiar degree in New York owing to the humidity of the atmosphere. When the thermometer approaches the hundred mark the heat is almost unbearable in the sun. Already there have been many casualties from the effect of the heat. On July 5th, when Independence Day was celebrated, what with the thermometer at 94° F., and the noise and smell of the numberless crackers and other descriptions of fireworks which supplied a vent for the overflowing patriotism of young America, life (a correspondent writes) was scarcely worth living. Without doubt, if this weather continues, as it is predicted it will, the scenes of last July will be repeated, when horses and men died in large numbers in the streets.

THE PHYSIOLOGY OF THE ADRENALS.

A LONG and interesting article on the Physiology of the Suprarenal Bodies is to be found in the June number of *Pflüger's Archiv*, written by Dr. Arthur Biedl, one of the assistants in the Vienna Institute. The points to which he has directed his particular attention are the vaso-motor nerves and the secretory nerves of these organs. He describes in detail the operative procedure he adopted in his experiments, and arrives at the conclusion that certain vaso-dilator fibres run in the splanchnic nerves to the adrenals, partly because no other explanation can be offered of the rapidity with which hyperæmia follows stimulation of these nerves, partly on account of the steady increase of the hyperæmia as the stimulation is continued, and partly because of its continuance for some time after the cessation of stimulation quite independently of the blood pressure in the arteries. He has observed that in the dog the splanchnics, after traversing the diaphragm, give off on each side, before they enter into the formation of the solar plexus, a single large branch to the adrenals, and these, he believes, contain the chief vaso-dilator fibres, since, if divided, the stimulation of the splanchnics in the

thorax is without influence, whilst stimulation of the distal extremities of the divided nerves is followed by active hyperæmia. From a critical review of the researches of previous investigators he considers the facts actually established in regard to the vaso-dilator nerves distributed to the abdominal viscera to be that these nerves leave the spinal cord chiefly by the anterior roots of the lower dorsal nerves and, running in the rami communicantes, enter the sympathetic in the dorsal region and are distributed with the branches of the splanchnic nerves to the large and small intestine, the liver, kidneys, pancreas, and adrenals. He has satisfied himself that there are ganglia on the vessels distributed to the adrenals, and that although their presence has not been anatomically demonstrated vaso-constrictor nerves exist. The two sets of nerves, vaso-dilators and vaso-constrictors, run in the same trunks, their relative proportion varying to a considerable extent. Dr. Biedl has devoted much time and attention to the secretory nerves of the adrenals. These organs belong to the class of those which have an internal secretion discharging the materials they elaborate into the blood. Various investigators have been led to the belief that the granules well known to exist in the blood of mammals proceed from the adrenals. Others have shown that the venous blood of these organs resembles arterial blood in colour, and yet another observer has demonstrated that the peculiar extract of the adrenals is not a post-mortem product, but is contained in the venous blood returning from these organs during life. Dr. Biedl, in his experiments directed especially to the determination of the changes in the morphological elements of the venous blood and the behaviour of the extract with its peculiar action on the blood pressure, found that after stimulation of the suprarenal branch or of the splanchnic nerve in the thorax the number of bright granules or little masses of protoplasm was diminished, and at the same time the number of the leucocytes of the blood was reduced, these bodies being apparently retained within the organ. In regard to the active extract, Dr. Biedl believes that the splanchnic nerves do not only contain vaso-dilators, but that they are also associated with the secretory nerves of the adrenals, which run in the same trunks, and that stimulation of these nerves leads to some, though not material, increase in the quantity of the active extract produced.

DILATATION OF THE STOMACH IN INFANCY.

IT is well known that dilatation of the hollow viscera is a morbid condition commonly gradual in its development and equally, if not more, slow in its amendment. It derives, moreover, a peculiar interest from the fact that it constitutes a form of change which marks the transition between functional and organic disease—a stage at which overwork and weakness of tissue account for the whole pathology, and which is therefore often well within the hope of a healthy reversion. Additional light has recently been shed on this subject by a paper published by Dr. Comby in the *Journal de Clinique et de Thérapeutique Infantiles* of July 1st, 1897. The writer's observations have been limited to the study of gastric dilatation during infancy. He finds that at an age when the newly-formed organ might be expected to be fully competent the stomach frequently shows a marked degree of dilatation. In 64 children who died in the Hospital for Sick Children, Paris, this viscus was found to be dilated, its volume varying from 200 c.c. to 310 c.c. In 16 others it was contracted. Dr. Comby explains the former condition as being due to atony produced by an auto-infection by putrescent matters resulting from an improper diet, the latter as an evidence of the refusal of such food by the child, who is consequently starved. He believes that infantile dilatation is by no means always recovered from, and that many cases of a like kind which are discovered only in the adult or the aged have had their true beginning in the earliest months of life. As the best means of treatment besides a suitable diet, he advocates irrigation of the stomach, a catheter being passed along the gullet into the stomach, and this organ repeatedly washed out with fifty or sixty grammes of tepid boiled water or Vichy water. He has never known this method to give rise to any serious inconvenience.

THE GENERAL MEDICAL COUNCIL.

THE committee appointed to consider the Midwives Bill now before Parliament, in pursuance of the request of the Lords of the Privy Council, will meet at the offices of the Council on Monday next, the 26th inst. It is understood that the usual July meeting of the executive committee will not be held in the absence of any urgent business.

CEREBRAL ABSCESS IN CHILDREN.

AT the recent meeting of the American Pediatric Society Dr. Hott gave an account of four cases of this condition which had come under his notice. Details were published in *Pediatrics* of June 1st. The first case was that of a child, aged six weeks, and this has the peculiar interest of being the earliest age at which an intracranial abscess has been described. The child was born easily and naturally and there was no history of injury or disease. It was a fat, healthy-looking infant, with nothing abnormal until four days before death, when swelling of the left thigh commenced. On admission to hospital the child was found to be almost moribund, with a feeble, almost imperceptible pulse, and a temperature of 99·5°F, but without coma. The thigh was incised, but no pus was found, only disorganised blood. The patient died, and examination of the brain revealed an abscess in the parietal lobe, with some recent local meningitis on the inner surface of the dura mater. The abscess cavity was 7 cm. long and 5 cm. deep, and contained two ounces of pus. The only likely source of infection was from the external ears, each of which had been punctured, and the punctures were found covered with dirty fluid encrusted with pus. The second child was three months old. The symptoms developed acutely—viz., irregular shallow respiration, retracted abdomen, and fever. There was also opisthotonos in the last few days and convulsions on the last of all. There was found to be a large abscess of the right parietal lobe, which communicated with the ventricles, and pus was found in the left petrous bone, although there was no discharge from the ear during life. The third patient was also three months old and was said to have been well and strong until seven weeks before, when it fell from the bed on to the floor. Three days later the patient cried out sharply and vomited. On admission to hospital there were emaciation, occasional vomiting, and discharge of blood from the left ear. Death took place suddenly, and there were found to be meningitis of the inferior surface of the cerebellum and an abscess as big as a hazel nut. The fourth case was that of a child nine months old. On admission the patient was found to be in excellent condition as regards nutrition, but there were internal strabismus, dilatation and inactivity of pupils to light, and increased knee-jerks; there was no fever. Vomiting occurred occasionally, and symptoms of irritation alternated with drowsiness. Gradually rigidity developed in the lower extremities and hands, and there were slight paralysis of the left side of the face and discharge of pus from the ear. The child died in the eighth week of the illness, and at the necropsy two abscesses of considerable size were found in the right lateral lobe of the cerebellum. These did not communicate, and no pus was found in the

auditory canal. In conclusion Dr. Hott gives a short account of the different conditions in which cerebral abscess occurs in children. It is rare in the first four years of life, more common later, and the first case referred to is the youngest case recorded.

A PROFESSORSHIP OF PUBLIC HEALTH AT LIVERPOOL.

WE notice with pleasure that the Council of University College, Liverpool on the recommendation of the Senate and Medical Faculty, have converted the Medical Lectureship of Hygiene into a Professorship of Public Health, and that the appointment has been given to Dr. E. W. Hope, medical officer of health to the corporation of Liverpool, Lecturer on Hygiene in University College, Liverpool, and Examiner in Public Health in Victoria University, Manchester. The creation of the professorship and the appointment of Dr. Hope are creditable to the authorities of the College. Liverpool long had an unenviable distinction as the unhealthiest of our largest cities. The steady removal of this scandal is due very largely to the clearness with which Dr. Hope and his predecessor, Dr. Taylor, demonstrated the causes of this high mortality, and to the perseverance with which they urged the Corporation of Liverpool to wage incessant war with the causes of disease which existed in the cellars and other unhealthy dwellings, and with the intemperance and other evil habits of many of its crowded population. The action of the authorities has been rewarded by a large measure of success, so that Liverpool can now boast a lower rate of mortality than other towns the density of the population of which is much less, such as Dublin and Manchester. There is a large decrease in the number of deaths from the principal zymotic diseases. Typhus fever is not so effectually extinguished as in London and Ireland; but according to Dr. Hope's recent report its mortality in 1896 was at the rate of 5·6 per 100,000 of the population, as compared with 132·1, the rate for the decennial period 1866-75. Mortality from tuberculous disease is also being largely reduced. There is still, however, much to be done, and the death-rates from fever, diarrhœa, and measles testify to a large preventable mortality. There can be no better way of securing this than by magnifying the office of the medical officer of health; and this is especially wise when the officer is one so capable as the present occupant of the post.

POSSIBLE EXCEPTION TO COLLES'S LAW.

AT the recent meeting of the American Dermatological Association Dr. Corlett, of Cleveland, recorded an interesting case[1] of great importance, although, unfortunately, not complete and conclusive. He urges that we may look for an occasional exception to this law, which need not necessarily impair its general value as a clinical fact. The case was as follows. A woman applied to the Charity Hospital on account of an extensive eruption on her infant. It was discovered that there was also a suspicious looking lesion on her own breast. The child was two months old, with a dark reddish macular eruption over the entire body, including the palms and soles. Over the buttocks extensive excoriations were present and the infant had snuffles and mucous patches, and was small and shrivelled in appearance. The child had apparently been born at full term and was healthy for three weeks after birth. There seemed to be no doubt that the child was syphilitic. The mother was anæmic and complained of aching in the bones of her legs. There was a sore on the left breast about two inches from the nipple, which had appeared about two weeks after the child's mouth became sore. This sore was a superficial ulcer about the size of a split pea, indurated and with a slight serous discharge. The axillary glands were enlarged, freely moveable, and painless. The post-cervical lymphatic glands were also enlarged, and there was slight redness of the mouth. The skin was free from other scars or eruption, but the sore looked extremely like a primary sore, and there seemed to be a presumption that the infection was from the child. The history of the mother was that she had enjoyed good health and had borne to her first husband two healthy children still living. She had never miscarried. She had been married a second time a year before she came under observation, her second husband having been a widower for three years and having had by his first wife four healthy children. According to his wife's statement he had been under treatment for some disease recently, but he was said to appear well, often, however, taking medicine for a "cold." An effort was made to see the husband, but it was unsuccessful, and the mother and child also disappeared, so that the case is incomplete. But the evidence, such as it is, seems at least to suggest that the cases may illustrate, as some hold, that Colles's law is by no means one without exceptions. It is unfortunate that it was impossible to follow the cases through their subsequent history.

[1] Pediatrics, June 1st, 1897.

ON July 14th H.R.H. Princess Christian laid the foundation-stone of the new cancer wing at the Middlesex Hospital. The new building will accommodate thirty-six female patients who, in the words of the founders of the cancer wards, are never discharged until "relieved by art or released by death."

DR. HERMANN WEBER, the President, will preside at the thirty-ninth annual meeting of the New Sydenham Society at 20, Hanover-square, on Tuesday next, at 4 P.M. All interested in the society, whether members or not, will be welcome at the meeting.

THE *London Gazette* of Tuesday, the 20th inst., announces that the Prince of Wales has been pleased to appoint Sir William Mac Cormac, Bart. (President of the Royal College of Surgeons of England), and Mr. Alfred Downing Fripp (M.S. Lond., F.R.C.S. Eng.), to be Surgeons-in-Ordinary to His Royal Highness.

AT a recent meeting of the council of the British Institute of Preventive Medicine, Dr. Allan Macfadyen was appointed Director of the Institute.

THE *London Gazette* of Friday, July 16th, announces that the dignity of a Knight of the United Kingdom of Great Britain and Ireland has been conferred on Mr. Thomas Naghten Fitzgerald, F.R.C.S. Irel., senior surgeon of Melbourne Hospital.

EDINBURGH DENTAL HOSPITAL AND SCHOOL.—The summer meeting of the Edinburgh Dental Hospital and School was held on the premises in Chambers-street on July 16th, Bailie Sloan presiding. The report for the past session showed that there were at present forty-nine students, twenty-two of whom had been enrolled during the past year. The increasing attention paid to the conservation of the teeth was referred to, and it was stated that the prosthetic possibilities of the cases were carefully observed by the students entrusted with the construction and fitting of the dentures. During the year from July 1st, 1896, there were 6075 conservation cases and 4545 patients underwent operations in the surgical department. The chairman afterwards presented the medals and prizes to the successful students.

The Lancet Special Commission
ON
SICILY
AS A HEALTH RESORT.

IV.[1]

Public Health Questions in Sicily.—Rates of Mortality.—The Amount of "Fever," Malaria, Typhoid, Diphtheria, Dysentery, Diarrhœa, &c.—Rate of Incidence of Respiratory Affections.—Favourable Statistics regarding Phthisis.—Spas and Mineral Springs of Sicily: Termini, Sciacca, Acireale, Sclafani, Barcellona, and Acqua Santa di Palermo.—Sanitation and Water Supply.—Analyses of Waters made in THE LANCET *Laboratory.*

IT would be beyond the scope of these articles to attempt to give an exhaustive account of public health and disease in Sicily. Attention must be limited for the most part to those phases of the subject which affect the suitability of the island as a health resort. Sicily has the reputation of being one of the healthier portions of the Italian kingdom, and this reputation would appear to be well founded. Malaria, though somewhat widely prevalent during the summer months, is not usually of a severe type, and the deaths from this disease per 10,000 inhabitants are given by Dr. Andrew Davidson[2] as 8·4, which may be compared with the figures for Latium (13·2), Calabria (20·4), Campania (2 5), and Sardinia (20 0). "Fever" prevails somewhat extensively, but it is a moot point whether this is usually typhoid fever or the much less serious "Mediterranean fever" or "Malta fever." To this point we shall return, as a definite view upon the subject is indispensable for a correct interpretation of the Sicilian mortality tables. Dysentery, diarrhœa, and diphtheria are relatively somewhat prevalent, while, on the other hand, diseases of the respiratory organs (including pulmonary tuberculosis) are below the European average. Ophthalmic affections are common. Rheumatism is common. Under the other heads of disease there does not appear to be anything characteristic to note. The annual rates of mortality in the principal towns, though somewhat high if tried by the British standard, are moderate for Southern Europe. The rate for Palermo is about 24 5 per 1000, for Catania 28 4 per 1000, and for Syracuse 25·4 per 1000. These figures are calculated from the officially certified number of deaths and probable population, and may be accepted as at least approximately accurate. When it is remembered that there is much poverty in Sicily, and that poverty has a considerable influence upon mortality, and when the higher average mortality in warm as compared with temperate countries is borne in mind, these returns must be regarded as not unfavourable. The general death-rate of the entire kingdom of Italy for the ten years ending 1887 was 28·1 per 1000, so that the Sicilian towns are, on the whole, below the general average. The special questions in this connexion which most directly affect the suitability of Sicily as a health resort are the following: (1) the character and amount of "fever" (including malaria) prevalent in the island; (2) the amount of dysenteric and diarrhœal affections; and (3) the amount of respiratory disease, including phthisis. These questions will now be examined in detail.

1. Visitors to the various Mediterranean sanatoria are familiar with the fact that at most of these resorts there prevails an affection known as "low fever," "coast fever," "continued fever," "Mediterranean fever," "Neapolitan fever," "Malta fever," &c. Surgeon-Colonel Lane Notter defines this disease as "an endemic fever of long duration, accompanied by profuse perspiration and constipation, and often followed by pains of a rheumatic or neuralgic character, swelling of the joints, or orchitis, and tenderness or enlargement of the spleen. The disease is further characterised by a small mortality, tedious convalescence, a constant liability to relapses, and well-marked anæmia. It is not contagious." The question whether this fever is a variety of typhoid fever or distinct from that disease has excited much controversy, but the great preponderance of opinion amongst experts is in favour of the differentiation of the two affections. This is the view upheld by Bruce, Davidson, Hughes, Maclean, Notter, and others. The subject has an important bearing upon the nosology of Sicily, where forms of low continued fever are common. The Sicilian practitioners are by no means agreed as to the proportion of these fevers which should be regarded as Mediterranean fever and as mild typhoid fever. By some genuine typhoid fever is regarded as quite rare in Sicily, while others regard it as common, though usually somewhat mild in its course and favourable in its event. The subject is involved in great obscurity aad is one upon which a difference of opinion is natural and inevitable. Professor L. Giuffrè, of the University of Palermo, gives an opinion that in that city "la febbre tifoidea genuina è molto rara" (genuine typhoid fever is very rare), and in summing up his conclusions in his learned monograph upon "The Continued Fevers observed in Italy from 1872 to 1886" he regards the continued fever common in Sicily as "a definite species absolutely distinct from typhoid fever, and up to a certain point distinct also from the classical "miliary" fever, of which it is in all probability a recent transformation." Professor Cervello, of Palermo, also regards genuine typhoid fever as rare, but this view is not universally held by the Sicilian practitioners, some of whom believe that many of these cases of obscure continued fever are really mild cases of typhoid fever. Turning to the official returns, it appears that at Palermo (where compulsory notification of disease is in force) the number of cases of typhoid fever notified in recent years was as follows:—1893, 76 cases; 1894, 151 cases; 1895, 58 cases; and 1896, 112 cases. The above figures are those officially supplied by the municipality, and they are remarkably low for a city of 280,000 inhabitants. They cannot be reconciled with the statement of Dr. Andrew Davidson,[3] that the average death-rate from typhoid fever per 10,000 living is in Sicily 14·3. There is here a radical discrepancy which can only be explained by assuming that the returns are calculated on different principles. There seems no doubt that typhoid fever is generally very prevalent in Italy. Hirsch[4] remarks that "in Italy, while the deaths from typhoid fever in the army in 1877 were 342, in a general mortality of 2072 among an effective force of 193,650 men, or 1·8 per 1000, the deaths from this disease in the country generally reached the enormous figure of 16·5 per cent. of the total mortality." The true rate of prevalence of typhoid fever in Italy and Sicily must remain doubtful while the nosological relation of that disease to "Mediterranean fever" (the "febbre infettiva" or "febbre innominata" of the Sicilian authorities) remains undetermined, or, at least, disputable. What seems certain is that in the various Sicilian towns there is a large amount of low continued fever—whether mild, typhoid, or Mediterranean fever—but that well-marked typhoid fever of the type familiar to English observers is not common. The facts regarding malarial fever are clearer and less open to controversy. Malaria is widely prevalent in Sicily, but it is not usually of a severe type; it is almost confined to the summer and autumn months; it hardly exists in the large towns except as an importation, and its importance to winter visitors is practically *nil*. Professor Cervello has kindly favoured THE LANCET Commissioner with the following memorandum on the subject: "It is undoubtedly true that there are in Sicily certain localities infected with malaria, but this need not by any means be a danger to strangers who come to pass the winter with us, since the places where they sojourn—such as Palermo, Catania, Acireale, Taormina, &c.—and those to which they pay a passing visit are absolutely exempt from malaria and perfectly healthy. The infected localities are circumscribed and distant from the great centres ..... hence the question of malaria concerns the inhabitants of the island exclusively, and not all of these, but only those who cultivate these infected districts. Further, the malarial fevers occur from the end of June to the beginning of October, a period in which travellers do not come to Sicily." Inquiries made in many parts of Sicily confirmed the above statement, and Dr. Tommasi-Crudeli, of Rome, the well-known authority on malaria, has verbally given the Commissioner his views on malaria in Sicily, and these views do not differ in any material point from those of Professor Cervello. Catania is probably the most malarious commune in Sicily, so that an examination of the figures for Catania will show the worst phase of the island from the point of view of malaria. The average deaths per annum from malaria

[1] Nos. I., II., and III. were published in THE LANCET of June 5th and 12th, and July 3rd, 1897, respectively.
[2] Geographical Pathology, vol. i., Article Italy.
[3] Ibid., p. 229.
[4] Handbook of Geographical and Historical Pathology, vol. i., p. 626.

in Catania were (1878–1895) 39. It must be remembered that the cases do not arise in the city, but almost without exception come from the Piana di Catania, parts of which are highly malarious in summer and autumn. As regards Palermo Professor Giuffrè writes: "Le febbri di malaria in Palermo non esistono." (Malarial fevers do not exist in Palermo). Cases occasionally arise in marshy land some miles distant from the city, but these are practically confined to the cultivators of the soil. Girgenti, Syracuse, and Taormina are also virtually exempt from malaria, so far as the towns are concerned, although the disease is frequent in their vicinity during summer and autumn. The subject of malaria in Sicily is one of great importance to the inhabitants of the island, and is of much interest to the scientific observer, but it may be affirmed with confidence that it is one with which the invalid visitor has no practical concern. In winter and spring and in the districts frequented by foreigners malaria may be said to have no existence.

2. Dysenteric and diarrhœal affections are, as already stated, common in Sicily, especially in summer and autumn. They are probably due to heat, imperfect sanitation, and the consumption of unwholesome fruit. In Catania the deaths from dysentery (1881–95) averaged 69 per annum, nearly twice as many as the deaths from malaria. It is satisfactory to note that a marked improvement seems to be in progress as regards this disease. Thus the deaths from dysentery, which were 161 in 1881 and 124 in 1882, had fallen to 53 in 1893 and to 35 in 1894. Catania has been improving its water-supply, and the above is the satisfactory result. Diphtheria is somewhat common in the Sicilian towns, and forms one of the chief items in the bills of mortality. The deaths from this disease in Palermo during recent years have been as follows: 1893, 126 deaths; 1894, 305 deaths; 1895, 267 deaths; and 1896, 138 deaths. In Catania the deaths from this disease have averaged (1878–95) 103 per annum, but in the case of diphtheria, as in the case of dysentery, Catania can show a marked improvement in recent years. Thus, the deaths from this cause, which numbered 229 in 1878 and 316 in 1879, had fallen to 29 in 1894 and to 39 in 1895. The disease is one which varies much from year to year, but the progressive improvement is striking and creditable. Although Catania comes so well out of these comparisons, it must be borne in mind that the general mortality there is considerably higher than in Palermo.

3. The subject of the prevalence of respiratory diseases in Sicily is one of great interest and importance, since sufferers from these maladies furnish the chief contingent of those who seek climatic change in winter. The general consensus of opinion among the Sicilian practitioners is that bronchitis and pleurisy are somewhat common, pneumonia not common, and pulmonary tuberculosis common, but below the general European average. Professor G. B. Ughetti's memoir, "Sulla Tubercolosi in Catania," contains much interesting information regarding the prevalence of the last-mentioned disease in Sicily. It would appear that in the year 1878, when the population of Catania was 90,423, the deaths from pulmonary tuberculosis were 120, a rate of 1·32 per 1000 inhabitants. In 1888, when the population of the city had increased to 106,847, the deaths from pulmonary tuberculosis were 127, a rate of 1·18 per 1000. In 1895 the population of Catania was 115,992 and the deaths from pulmonary tuberculosis 144, a rate of 1·24 per 1000. These are remarkable figures, and would tend to show that the rate of prevalence of pulmonary tuberculosis in Catania is far below the ordinary European average. Hirsch, whose authority is not only high, but free from any suspicion of bias in favour of Sicily, gives the rate in Catania as 1·42 per 1000 inhabitants. How very favourably this contrasts with the general average of cities will be apparent from the following table, which is also derived from Hirsch's great work, "Handbook of Geographical and Historical Pathology."

Table showing the death-rates from pulmonary tuberculosis per 1000 inhabitants.

Christiania	3·45	San Francisco	2·97
Stockholm	4·1	Edinburgh	3·0
Copenhagen	3·0	Glasgow	4·0
Berlin	3·8	Geneva	2·2
Leipzig	3·5	Paris	4·1
Dresden	3·8	Milan	3·6
Munich	4·0	Rome	3·42
Cologne	4·4	Naples	2·75
London	3·2	Palermo	2·64
Melbourne	2·2	Algiers	2·9
Boston	3·3	Catania	1·42
New Orleans	3·9		

The table shows how ubiquitous a disease is pulmonary tuberculosis, and also how uniform on the whole are its ravages in the great cities of the world. Professor Ughetti claims for Catania the lowest relative mortality from this disease of any of the Italian and Sicilian cities. He also finds that Sicily as a whole compares very favourably with the Italian kingdom in general, and gives a table to show that the deaths from tuberculosis (pulmonary and meningeal) in Sicily are only about half the average for Liguria, Lombardy, and Tuscany.

The interesting and important subject of the natural mineral and thermal waters of Sicily will now be considered. The geological formation of the country, the wide diffusion of sulphur-producing strata, and the large amount of volcanic activity present conditions which lead the observer to expect numerous spas and mineralised springs, and this expectation is found to be justified. The following list (though probably not exhaustive) comprises the chief thermal and mineral waters of Sicily:—(1) Termini-Imerese; (2) Sciacca; (3) Acireale; (4) Sclafani; (5) Barcellona; and (6) Acqua Santa di Palermo. Full analyses of the majority of these waters have been furnished to THE LANCET Commissioner, but considerations of space compel a somewhat summary treatment of the subject.

1. *Termini-Imerese.*—There are two springs at Termini, known as the South-west spring and the North-east spring. The former is called "salino-alcalino-acidulo-terrosa," and its characters, according to the analysis of Professor Paternò, are briefly as follows. The water is perfectly limpid as it comes from the spring, but becomes turbid after a considerable exposure to the air. It is colourless and odourless, and has a saltish and bitter taste. Its temperature is uniformly 43° C. (= 109·4° F.). Its specific gravity is 1·0119. It slightly reddens blue litmus paper. It does not decolourise a solution of permanganate of potassium. A kilogramme of the water contains: Nitrogen, 0·0168 gramme; oxygen, 0·0011 gramme; carbonic acid, 0·1300 gramme; sulphurous acid, 0·1078 gramme; chlorine, 8·3072 grammes; sodium, 4·6927 grammes; magnesium, 0·3492 gramme; and calcium, 0·5291 gramme. The chlorine is present in the form of sodium chloride, calcium chloride, and magnesium chloride—the first being much the most abundant. A kilogramme contains 0·0166 gramme of free carbonic acid. The north-east spring, according to the analysis of Dr. Oliveri, has the following characters. The water is perfectly limpid and does not become turbid on exposure to the air. The taste is saltish and the reaction neutral. The temperature is 42·50° C. (= 108·5° F.). The specific gravity is 1·011575. The amount of free gas in a litre is 26·60 c.c.—viz., carbonic acid, 12·35 c.c.; nitrogen, 10·05; and oxygen, 4·20. The chief mineral ingredients are chloride of sodium, chloride of potassium, chloride of magnesium, chloride of calcium, bromide of magnesium, sulphate of calcium, sulphate of magnesium, carbonate of calcium, carbonate of magnesium, and silicon. These waters are used both externally and internally, and Dr. Battaglia, the medical director of the baths of Termini, recommends them in the following affections—viz., muscular and articular rheumatism, chronic exudations, remains of inflammatory affections, various neuralgias, peripheral paralysis, some forms of spinal neurasthenia, passive congestion of the liver and spleen following malaria, some forms of gout, chronic adenitis, osteitis, and periostitis.

2. *Sciacca.*—Sciacca is situated on an eminence overlooking the sea upon the western coast of Sicily, and is distant about twenty-four miles from Castelvetrano. It occupies the site of the Thermæ Selinuntinæ of antiquity. The sources of the hot springs are situated in the valley between the town and Monte S. Calogero. The mineral waters of Sciacca are numerous and of varied composition. There is (*a*) a sulphur spring, of which the temperature is from 50° to 52° C. (= 122° to 125·6° F.), and the chief constituents sulphuretted hydrogen and chloride of sodium. A litre of the waters contains 1·5 grammes of the former and 8·026 grammes of the latter ingredient. (*b*) The Acqua Santa of Sciacca, which has a temperature of from 30° to 32° C. (= 86° to 89·6° F.), and of which the composition closely resembles the mineral waters of Vichy and of Casamicciola. The free carbonic acid present in a litre of this water amounts to a gramme, and fifty-eight centigrammes carbonate of iron to twenty-three centigrammes and chloride of lithium to 0·31 gramme. (*c*) The Acqua Ferrata of Sciacca, which has a temperature of 28° C. (= 82·4° F.), and which is very rich in bicarbonate of iron, a litre of the water containing

eighty-three centigrammes of this salt. It also contains a considerable amount of free carbonic acid. The vapour baths of S. Calogero, which are close at hand, add to the extensive resources of Sciacca. The temperature of the vapour in these grottoes varies from 36° to 42° C. (= 96·8° to 107·6° F.).

3. *Acireale.*—Acireale rests upon the lava streams of Mount Etna, at an elevation of 560 ft. above the sea-level and distant about nine miles from Catania. The waters (Terme di Santa Venera) are not thermal. The gases present in the waters in the free state include sulphuretted hydrogen (10 508 c.c. per litre), carbonic anhydride (95·704 c.c. per litre), oxygen, and nitrogen. The chief mineral ingredients are chloride of sodium (2 68466 grammes per litre), sulphide of sodium, chloride of potassium, chloride of magnesium, chloride of lithium, iodide of sodium, carbonate of calcium, carbonate of magnesium, manganese, and silica. The climate of Acireale resembles that of Catania, but its greater elevation gives it some advantage. The late Professor Cantani, of Naples, who esteemed Acireale very highly, attached great importance to the fact that the town being built upon the "terreno vulcanico" had a very dry soil, while the humidity of the air was moderate, thus ensuring equability of temperature. The mineral waters of Sclafani, Barcellona, and Acqua Santa of Palermo are of less importance.

It will thus be seen that the resources of Sicily in spas and mineral springs are ample and varied; they have not, however, been developed in any thorough or systematic way. The bathing arrangements and hotel accommodation are good at Termini and Acireale, fair at Barcellona, elsewhere mediocre. The bathing season, as generally in Europe, is from the end of spring to the beginning of autumn.

The important subject of the potable waters of Sicily may fitly conclude this article. The Sicilian towns have been making great progress during recent years as regards their water-supply. Public interest has been aroused in the subject, which, it need hardly be said, is one of the first importance both to the inhabitants of the island and to tourists and invalids. Palermo has recently introduced an admirable water (the "Scillato") from sources in the Madonian Mountains seventy kilometres from the city. It has also other sources of supply showing a high degree of purity. Marsala has recently introduced a new water-supply. The water-supply of Girgenti is limited in amount, and, on the whole, defective in quality; but the spring from which the sample examined in THE LANCET Laboratory was drawn shows an admirable degree of purity. Professor Ughetti certifies that the water-supply of Catania is "good and sufficient." Taormina has a very limited water-supply, but the quality is good.

It has been pointed out that the Sicilian towns have shown considerable enterprise in improving their water-supplies, and the analyses made in THE LANCET Laboratory show that this enterprise has had its reward. It cannot, however, be affirmed that they have made equal progress as regards drainage, cleansing of streets and harbours, &c. Most of the towns have a very antiquated system of drainage, the soil is in many cases much impregnated with organic refuse material, the outfall is in close proximity to residential quarters, and the almost tideless Mediterranean increases the difficulty of disposing satisfactorily of sewage matters. The flushing of the sewers is done somewhat imperfectly and intermittently. The cleansing of the streets is not effected in any thorough or efficient manner, decaying vegetable matter and various kinds of garbage being freely exposed to the powerful rays of a southern sun. In all these respects much work remains to be done to render the sanitary condition of Sicily satisfactory. The energy shown in providing new sources of water-supply encourages the hope that in time sanitation will be dealt with in a like spirit. The results of the analyses of the samples of Sicilian waters forwarded to THE LANCET Laboratory are appended.

THE LANCET ANALYSIS OF SICILY WATERS.

The samples were received on June 15th at THE LANCET Laboratory, where they were submitted to chemical examination and analysis at some length. In all eight specimens were examined. Of these seven were distinctively labeled, while the eighth sample was unlabeled. The stopper of the ninth sample had evidently become detached, since there were not more than a few ounces of water in the bottle. This sample and the eighth are, therefore, omitted from the list. The waters were contained in clean, colourless, stoppered bottles of about two litres capacity. The stoppers were tied down and covered with a leather cap and sealed. The results of analyses, expressed in grains per gallon, together with other observations, were as follows:—

SAMPLE 1.—*Scillato Serpatoio S. Ciro.*

Appearance	Clear, bright; no deposit.
Colour	Faintly blue.
Odour	None.
Total solid matter	16·80
Change on ignition of solids...	None.
Total hardness	11·20.
Chlorine	1·05.
Equal to common salt	1·73.
Nitrogen in nitrites	0·050.
Nitrogen in nitrates	None.
Free ammonia...	None.
Albuminoid ammonia ...	None.
Oxygen absorbed in fifteen minutes	0·0018.
Oxygen absorbed in four hours	0·023.
Reaction	Slightly alkaline.

This is a sample of the new water-supply recently introduced into Palermo. The catchment area is at Scillato in the Madonian mountains 70 kilometres from Palermo. The S. Ciro reservoir is within three or four miles of Palermo and is a service reservoir. The soil of the catchment area is composed of secondary calcareous rocks. The temperature of the water in the basin at Scillato was 54·2° F., and of the air 57° F. The water shows that admirable organic purity characteristic of water derived from an uncontaminated chalky area. The mineral matter in solution consisted almost entirely of lime salts. The water is practically free from nitrogen either in mineral or organic form. It contained absolutely no free ammonia and yielded no ammonia (albuminoid) on boiling with alkaline permanganate; neither did it abstract oxygen to any appreciable extent when mixed with a weak solution of acidified permanganate. The water is irreproachable in quality.

SAMPLE 2.—*Acqua del Gabriele, from the Piazza Sant Annuzza.*

Appearance	Bright, no deposit.
Colour	Slightly blue.
Odour	None.
Total solid matter	27·3.
Change on ignition of solids	None.
Total hardness	19·68.
Chlorine	1·69.
Equal to common salt	2·78.
Nitrogen in nitrates	0·252.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·0046.
Oxygen absorbed in four hours	0·022.
Reaction	Slightly alkaline.

This is the "Gabriele" water of Palermo collected from a fountain in the Piazza Sant Annuzza in the city. The catchment-area is a few miles from Palermo, and the geological formation of the soil is triassic. The temperature of the water was 55·7° F., and of the air four degrees higher. Like the previous sample this water shows again a very remarkable degree of organic purity. The presence of an increased proportion of nitrates is noteworthy, but the amount, taking into consideration the environment of the water, presents no objection from a sanitary point of view. In considering other results—as, for example, those showing the complete absence of free ammonia or of organic nitrogen or any oxygen-absorbing capacity and of the source of the water—there can be little doubt of its freedom from any source of impurity. It contains more solid matter than the previous sample, which is to be attributed chiefly to the increase of lime salts. The quality of the water for drinking purposes is excellent.

SAMPLE 3.—*Sorgina Girgentis.*

Appearance	Brilliant, no deposit.
Colour	Slightly blue.
Odour	None.
Total solid matter	25·9.
Change on ignition of solids	None.
Total hardness	18·42.
Chlorine	1·82.
Equal to common salt	3·00.
Nitrogen in nitrates	0·252.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·008.
Oxygen absorbed in four hours	0·017.
Reaction	Slightly alkaline.
Metals	No trace.

This is a sample of water derived from a spring at Girgenti. The soil is pliocene. The temperature of the water at the time of collection was 56·4° F., and the air one degree higher. The water shows a chemical composition very similar to Sample 2. Its organic purity is, again, a feature. This is evident from the insignificant or practically negative results reported under chlorine, nitrates, free ammonia, albuminoid ammonia, and oxygen absorbed, and the fact that the residue on evaporation remained unchanged on heating. In respect of organic purity, as well also as in chemical composition, the water somewhat closely resembles the composition of the well-known pure waters derived from the deep chalk wells in Kent.

SAMPLE 4.—*Acqua di Scillato, from the Piazza di Cupo.*

Appearance	Quite brilliant.
Colour	A blue tinge.
Odour	None.
Total solid matter	15·4.
Change on ignition of solids	None.
Total hardness	11·8.
Chlorine	0·91.
Equal to common salt	1·50
Nitrogen in nitrates	0·056.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·007.
Oxygen absorbed in four hours	0·011.
Reaction	Slightly alkaline.
Metals	No trace.

This is another specimen of the Scillato water drawn from a fountain in one of the squares of Palermo, and, as will be seen, its composition differs but little from Sample 1, which is derived from the same source. These results are all the more satisfactory in showing that there is absolutely no exposure to objectionable contamination along the line of conduits. The high standard of purity is still maintained.

SAMPLE 5.—*Acqua Maurigi, from the Fonte nel Cortile Cascino.*

Appearance	Quite bright.
Colour	Slight blue.
Odour	None.
Total solid matter	23·8
Change on ignition of solids	None.
Total hardness	16·90.
Chlorine	2·31.
Equal to common salt	3·80.
Nitrogen in nitrates	0·252
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·005.
Oxygen absorbed in four hours	0·009.
Reaction	Slightly alkaline.
Metals	No trace.

This is a specimen of the Maurigi water, another of the Palermo potable waters. The specimen was drawn from a fountain in the city. Like the previous samples of potable water the results give not the faintest evidence of the presence of organic matter. Its composition is closely allied to Sample 2 except that there is a slight, but unimportant, increase in the amount of chloride. The relative proximity to the sea-border may probably account for this small difference.

SAMPLE 6.—*Acqua Corrao.*

Appearance	Brilliant, no deposit.
Colour	Faint blue.
Odour	None.
Total solid matter	28·0.
Change on ignition of solids	None.
Total hardness	18·68.
Chlorine	1·82.
Equal to common salt	3·00.
Nitrogen in nitrates	0·280
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	None.
Oxygen absorbed in fifteen minutes	0·009.
Oxygen absorbed in four hours	0·015.
Reaction	Slightly alkaline.
Metals	No trace.

This is another of the Palermo potable waters. The specimen was derived from a fountain in the city supplied from the Corrao reservoir. The catchment area is composed of calcareous rocks. The temperature of the water at the time of collection was 64·2° F. As might be expected, considering the nature of the area from which this water is collected, it shows a somewhat high proportion of mineral matters—in fact, the highest of the series—with a correspondingly increased degree of hardness due to chalk removable on boiling. In character it resembles Sample 3, some of the results being identical. The nitrates, however, are slightly increased. There is not a particle of evidence in the analysis that the water sustains the slightest pollution at any point.

SAMPLE 7.—*Acqua Santa.*

Appearance	Bright and clear.
Colour	Slight green.
Odour	None
Total solid matter	1291·5.
Change on ignition of solids	None observable.
Total hardness	—
Chlorine	652·4.
Equal to common salt	1075·1.
Nitrogen in nitrates	0·056.
Nitrogen in nitrites	None.
Free ammonia	Trace.
Albuminoid ammonia	0·0084.
Oxygen absorbed in fifteen minutes	0·008.
Oxygen absorbed in four hours	0·022.
Reaction	Distinctly alkaline.
Metals	No trace.

This is a mineral water, as is obvious from the analysis, which has its source in the environs of Palermo and arises in a grotto. It possesses a strong saline taste. The temperature varies from 64·4° to 66·2° F. The results show a high standard of organic purity. Its saline strength is about half that of sea-water, the constituents being similar. In addition to common salt it contains also important quantities of sulphate of lime and magnesia, while a distinct indication of lithium was afforded on examination of the residue by spectroscopic analysis.

To sum up, it is evident that the potable waters of Sicily submitted to us for examination show an exceptional purity. In not a single sample of water examined could any evidence be traced of organic impurity. It is remarkable also that the whole of the drinking waters with not one exception yielded absolutely no free ammonia, or even ammonia when boiled with alkaline permanganate. As is well known, any nitrogen present in an organic form, as in the form of albuminoid, is converted into ammonia on heating with a solution of permanganate of potash and caustic alkali. Under the heading of albuminoid ammonia in the foregoing results it will be observed that the satisfactory result, "none," is recorded all through the series. In the same way the

complete absence of organic matter is shown in the results coming under the heading of "oxygen absorbed." In every instance the amount was insignificant and quite negligible. Again, the residues obtained on evaporation showed not the least sign in any single instance of charring, so that not only is the presence of animal matter excluded, but also that of vegetable matter. The waters were clear and bright, fresh to the taste, and well oxygenated. According to the evidence furnished in the foregoing results these potable waters of Sicily are admirable in excellence and purity.

MEDICAL AID ASSOCIATIONS AND THE NORWICH MEMORIAL.

A MEETING of the medical profession in Norwich was held on the 17th inst., Sir Frederick Bateman, consulting physician to the Norfolk and Norwich Hospital, being in the chair, to consider replies from the Royal Colleges of Physicians of London and Surgeons of England (already given in THE LANCET) and from the Council of the British Medical Association, in answer to a memorial addressed to these bodies with regard to a medical institute and consultations with the medical officers thereof. The following resolutions were unanimously passed:—

1. *Royal College of Physicians of London.*

"That whilst the thanks of this meeting be given to the Council of the Royal College of Physicians for their reply to the memorial, the medical men of Norwich desire to express the hope that the College will in due course so alter its By-laws that it would not be considered 'a departure from its customary procedure' to forbid its Fellows, Members, and Licentiates from accepting positions derogatory to the honour and contrary to the best interests of the profession."

2. *Royal College of Surgeons of England.*

"That this meeting, whilst acknowledging with thanks the reception of their deputation and the reply of the Council of the College of Surgeons to the memorial, desire to express an opinion that steps should be taken so to amend Section XVI. of the College By-laws as to enable the Council to prevent its Fellows and Members accepting positions derogatory to the honour and contrary to the best interests of the profession."

3. *British Medical Association.*

"That a vote of thanks be accorded to the Council of the British Medical Association for so far answering their memorial in undertaking to memorialise the Medical Council to take further steps to prevent the growing evils of medical aid associations, but that this meeting regrets that the Council of the B.M.A. declines to give an answer to that part of the memorial which referred to consultations with the medical officers of these trading societies."

General Council of Medical Education and Registration.—The secretary reported that the memorial had been acknowledged by the Medical Council, but no reply had been received.

The Royal College of Physicians of Ireland passed the following resolution on Nov. 3rd, 1893, and confirmed it by a subsequent resolution of May 28th, 1897:—

"That the Royal College of Physicians, Ireland, desire to express their disapproval of their Licentiates accepting office in medical aid associations as at present conducted in England, inasmuch as the independence of the physician is destroyed by the system and the services of the physicians are used so as to produce a profit for lay persons, &c."

It was unanimously resolved that no further steps be taken with regard to meeting the medical officers of the Norwich Institute in consultation, as this had been decided by a large meeting of the profession (33) held on Jan. 18th, and subsequently endorsed by the signature of forty-one medical men in the city of Norwich.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

DELAY AT HEAD-QUARTERS.

As was indicated in our columns last week, the organizers at headquarters are not beforehand with their arrangements for their visitors. We have heard from several gentlemen who have sent their cheques that they have not been credited with the full amount of roubles necessary to become members, and that not having received their railway passes they remain in ignorance if these are being withheld because of incomplete payment or because the passes are not ready for distribution.

Mr. Makins, upon whom has devolved the practical work of the English Committee, tells us in another column that he has learned from Professor Roth that cheques for £1 are received in full discharge of the fee of membership, and that the free railway tickets are in active course of preparation—so that we can only preach counsels of patience.

We have been asked by Professor Roth to announce to our readers that the free railway tickets will not be available till after Aug. 1st, and the Secretary-General repeats his request for early information from members as to the frontier town at which they intend to arrive. This information should be sent to the Secretary-General before Aug. 1st, and we may add that for the purposes of these passes St. Petersburg is to be considered a frontier town.

The English Committee is now issuing the following letter to such intending members as have entered into correspondence with that Committee:—

International Medical Congress,
47, Charles-street, Berkeley-square, London, W.,
July 19th, 1897.

DEAR SIR,—As it appears possible that the delay in the receipt of tickets and certificates for the journey to Moscow may in some cases be due to defective fulfilment of the "conditions de voyage en Russie" laid down on pages 6 and 7 of the pamphlet "Renseignements divers," previously sent to you, the English Committee has prepared the form at the back, which should be torn off, filled up, and sent at once to Professor W. K. Roth, Secrétariat Général du XII. Congrès International de Médecine, Moscow.

If no acknowledgement of your cheque has been received the form can be altered to meet the case.

May I take this opportunity of pointing out that the English Committee is an honorary body and not a part of the Executive of the Congress, hence all questions regarding the business of the Congress, or relating to excursions, lodging, accommodation, &c., must be sent direct to the Secretary-General (in the case of lodgings to Professor Chervinsky, care of Secretary-General).

Yours faithfully,
G. H. MAKINS.

On the back of this letter is printed the following form:—

DEAR SIR,—I beg to inform you that I sent my subscription to the Congress last, and have received from you a post-card acknowledging the same.

I intend travelling to Moscow viâ (*here state route chosen*)

.....

entering Russia by (*here state frontier town of entry*)

.....

and leave by (*here state frontier town on return journey*)

.....

and I shall be much obliged by your forwarding the necessary tickets and certificates at your earliest convenience.

Name.....

Address.....

N.B.—The route chosen must be a direct one from the frontier to Moscow, and *vice versâ*. See "Renseignements divers," p. 7.

A FEW HINTS.

Intending visitors to Russia will do well to remember the following points:—1. A passport is absolutely necessary, for no one can enter Russia without one. 2. Any traveller staying in a hotel or an inn must hand over his passport to the landlord, to be by him passed on to the police. This and the following regulation hold good for every town visited. 3. If he is staying in a private house he must himself take his passport to the nearest police office. 4. Permission must be obtained to leave the country as well as to enter it.

5. Travelling in Russia is just as easy as anywhere else, provided the traveller conforms to the customs of the country and the police regulations, which are not irksome.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been forwarded to THE LANCET office. The total sum now amounts to over £37,000:—

	£	s.	d.
The Very Rev. the Chief Rabbi, from London Synagogues including—	1259	16	9
Great Synagogue	507	9	6
Bayswater	146	12	0
New West End	134	0	9
Central...	89	11	2
Hampstead	80	12	0
St. John's Wood	75	16	8
West London Synagogue for British Jews	217	1	6
St. Mary, Bryanston-square	273	0	10
St. Columba, Pont-street	100	16	0
Holy Trinity, Beckenham	60	8	0
St. John, Deptford	48	13	2
Spanish and Portuguese Synagogue	44	1	0
Chapel Royal, Hampton Court	50	2	8
St. George, Bloomsbury	68	8	6
St. Saviour, Pimlico	41	13	1
St. Alban, Holborn	52	10	4
Windsor-road (German Lutheran) Church, Denmark-hill ...	66	16	6
Pinner Parish Church and Chapel of Ease	39	6	0
Barking Parish Church	34	18	10
St. Margaret, Lothbury	54	3	6
Leyton Parish Church	27	1	0
Holy Trinity, Marylebone	36	10	8
St. Mary Magdalene, Munster-square	30	1	1
St. Matthew, Hammersmith	28	2	6
St. Saviour, Southwark (Cathedral)	30	8	8
Holly Park Wesleyan Chapel, Highgate	20	0	0
St. Paul, Clapham	21	17	5
St. Stephen, South Kensington	61	14	1
St. Mary (new) Church, Stoke Newington	49	15	10
St. Luke, Westbourne-park...	40	2	7
All Saints, Clapham-park	36	8	3
Finsbury-park Congregational Church	31	7	10

THE EARTHQUAKE IN INDIA.

THE Anglo-Indian papers contain, as might be expected, a good deal about the late earthquake in India, but full details of the disaster had not been received by them at the date of publication. The issue of some of the journals published in Calcutta must have been a matter of much difficulty and have given rise to a good deal of strain under the circumstances. The shock in Calcutta was the most severe that has been known to the oldest residents. The office of our contemporary, the *Indian Lancet*, for example, suffered severely. "Though a large two-storied building," we are told, "it rocked as if made of cardboard, and we expected it every moment to collapse. The whole building, as a result, has been very severely damaged, and it is with a great effort that the paper is being issued on due date."

The damage done to property has been considerable; indeed, there is scarcely a house that has escaped entirely. The *Indian Medical Record* of June 16th says that the scare in Dharamtala-street, where its office is situated, was one of intense excitement. The Medical College Hospital suffered seriously, and the panic among the patients was almost indescribable. The *Indian Medical Record* states that "most of the patients rushed out of doors, but some of the hospital staff with exemplary courage remained with those who were unable to move. It was some time after the shock before the terrified patients could be persuaded to return to their beds. There are some bad cracks in the walls and over the archways. The second surgeon's ward has suffered most. In the south verandah of the hospital the massive pillars are cracked to a dangerous extent. The Calcutta General Hospital has also suffered a good deal. The two ends of the structure are badly damaged, while the centre hall, set apart for some of the European patients, is in a dangerous condition. The patients have been removed from the hall to other quarters. One European patient named Clive, an actor by profession, had a narrow escape. He is suffering from enteric fever, and was lying unconscious at the time in a special ward, the walls of which were observed by his servant, who was with him, to crack. The man lifted his master out of bed, and just as he emerged from the room the walls caved in. It is reported that some, if not all, of the wards intended for the use of female patients and children cannot be availed of just now."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Friern Barnet Urban District.—Mr. Hugh Stott calls attention, in his annual report for 1896, to a case of enteric fever which was, he considers, caused by the consumption of oysters at Southend. The person in question, a hospital nurse, visited Southend with two friends, and all consumed oysters. A short time afterwards all three were attacked with diarrhœa and vomiting, and the nurse subsequently developed enteric fever. Mr. Stott communicated with the medical officer of health of Southend, but no other cases of enteric fever could be traced to this source. It appears from a report that has recently reached us, that the oyster merchants at Southend have so fully recognised the danger to which certain "layings" on the Southend foreshore were exposed that they have removed the oysters therefrom. It may be remarked that instances of vomiting and diarrhœa after the consumption of oysters are by no means rare, and in certain cases some of those thus affected have subsequently developed enteric fever.

Wigan Urban District.—The county borough of Wigan has not hitherto deemed an annual report from its medical officer of health a necessity, and has apparently contented itself with monthly reports. We are glad to see that the borough has now fallen into line, and we shall look forward to some interesting reports from Mr. William Berry, the present medical officer of health. The Wigan guardians, like many others, during the epidemic of small-pox at Gloucester, decided, at the earnest request of Mr. Berry, to enforce the Vaccination Acts; and it is to be hoped that they will have the courage to continue their enforcement now that the Gloucester "scare" has passed away. It is, however, a sad satire upon the whole system that those responsible for the administration of the Acts should have needed to be stirred into activity by the sanitary authority. Mr. Berry has, too, we note, prevailed upon the sanitary committee to adopt the compulsory notification of measles for three years. Wigan, or at least certain parts of it, still affords, it seems, a suitable nidus for typhus fever, and during 1896 twenty cases with seven deaths occurred.

Hull and Goole Port District.—Dr. J. Wright Mason draws attention in his current report to the necessity in new vessels of increased cubic space for the seamen, of covering the iron work so as to prevent sweating, of the provision of proper lavatory accommodation, and for the placing of berths further away from the sides of the vessels. Dr. Mason thinks that much good might be accomplished in regard to existing vessels if there were more uniformity among port sanitary officials in the several ports of Great Britain. Special attention was given during the past year to vessels from India, 15 having arrived from Bombay and 7 from Kurrachee.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6608 births and 3501 deaths were registered during the week ending July 17th. The annual rate of mortality in these towns, which had been 14·7 and 15·1 per 1000 in the two preceding weeks, further rose last week to 16·6. In London the rate was 16·3 per 1000, while it averaged 16·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 11·2 in Croydon, 11·4 in Halifax, 11·6 in Derby, and 11·7 in Bristol; the highest rates were 23·5 in Salford, 24·2 in Sunderland, 24·5 in Wolverhampton, and 32·2 in Preston. The 3501 deaths in these towns included 572 which were referred to the principal zymotic diseases, against 409 and 504

in the two preceding weeks; of these, 244 resulted from diarrhœa, 147 from measles, 73 from whooping-cough, 52 from diphtheria, 32 from scarlet fever, 23 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Croydon, Brighton, Blackburn, and Bradford; and the highest rates in Manchester, Burnley, Salford, and Preston. The greatest mortality from measles occurred in Birmingham, Birkenhead, Manchester, Salford, Burnley, and Preston; from whooping-cough in Salford and Huddersfield; and from diarrhœa in Plymouth, Bolton, Leicester, Sheffield, Liverpool, and Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 52 deaths from diphtheria included 36 in London, and 4 in Birmingham. One fatal case of small-pox was registered in Hull, but not one in any other of the thirty-three large towns, and there were no cases of small-pox under treatment during last week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospitals at the end of the week was 2903, against numbers increasing from 2380 to 2885 on the eleven preceding Saturdays; 381 new cases were admitted during the week, against 267, 310, and 349 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 127 and 116 in the two preceding weeks, rose again last week to 138, but were 51 below the corrected average. The causes of 28, or 0·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Bradford, Newcastle-upon-Tyne, and in seventeen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 17·7 per 1000 in the two preceding weeks, rose again to 17·9 during the week ending July 17th, and exceeded by 1·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·8 in in Aberdeen and 15·6 in Glasgow to 24·9 in Leith and 32·4 in Perth. The 534 deaths in these towns included 34 which were referred to diarrhœa, 23 to whooping-cough, 12 to measles, 7 to scarlet fever, 3 to "fever," and 1 to diphtheria. In all, 80 deaths resulted from these principal zymotic diseases, against 69 and 82 in the two preceding weeks. These 80 deaths were equal to an annual rate of 2·7 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The 34 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, and included 15 in Glasgow and 6 in Dundee. The deaths referred to whooping-cough, which had been 16 and 20 in the two preceding weeks, further rose to 23 last week, of which 12 occurred in Glasgow and 5 in Edinburgh. The 12 fatal cases of measles showed a further decline from recent weekly numbers, and included 6 in Edinburgh and 6 in Leith. The 7 deaths from scarlet fever corresponded with the number recorded in the preceding week, and included 3 in Aberdeen and 2 in Glasgow. The 3 fatal cases of "fever" were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 104 and 69 in the two preceding weeks, were 68 last week, and were 16 below the number in the corresponding week of last year. The causes of 43, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·3 and 21·6 per 1000 in the two preceding weeks, further fell to 24·2 during the week ending July 17th. During the thirteen weeks of last quarter the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 15·5 in London and 14·9 in Edinburgh. The 162 deaths registered in Dublin during the week under notice showed an increase of 17 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 11 and 9 in the two preceding weeks; of these, 4 resulted from "fever," 3 from whooping-cough, 2 from diarrhœa, 1 from measles, and 1 from scarlet fever. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 2·8 in London and 2·7 in Edinburgh. The 4 deaths referred to "fever" exceeded the number recorded in any week since March last. The 3 fatal cases of whooping-cough showed a further increase upon the numbers returned in recent weeks, while the mortality from scarlet fever and from diarrhœa corresponded with that recorded in the preceding week. The 162 deaths in Dublin last week included 26 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths of infants showed a slight further decline, while those of elderly persons showed a further increase upon recent weekly numbers. Seven inquest cases and 4 deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN JOHN D. FERGUSON and Surgeon-Captain George S. McLoughlin are seconded for service in East Africa. Surgeon-Major Patrick J. Nealon, M.D., is placed on temporary half-pay on account of ill-health.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon Lieutenant Cochrane is reported to have passed the required examination in Urdu. Surgeon-Captain W. C. Sprague is appointed to act as Civil Surgeon, Karwar. Surgeon-Major J. P. Barry, on relief, is appointed to act as Superintendent of the Lunatic Asylum, Colaba. Surgeon-Captain J. L. T. Jones, on relief by Surgeon-Major A. W. F. Street, is appointed to take over the duties in Poona performed at present by Surgeon-Major J. P. Barry and Surgeon-Captain W. W. O. Beveridge. Surgeon-Captain A. E. Berry is appointed to the Officiating Medical Charge of the 4th Madras Pioneers. Surgeon-Captain A. W. Dawson, on plague duty, has been transferred from Lucknow to Hardwar in the Saharanpur District, and Surgeon-Captain J. F. Kelly, on plague duty, has been transferred from Hardwar in the Saharanpur District to Lucknow. The services of Surgeon-Captain C. D'Alton, A.M.S., and Surgeon-Captain J. F. M. Kelly, A.M.S., are replaced at the disposal of the Government of India, Home Department. Surgeon-Captain Jay Gould has been appointed an additional Health Officer of the Port of Calcutta. Dr. C. Banks, Superintendent of Emigration, has been appointed an additional Health Officer of the Port of Calcutta in addition to his own duties. Surgeon-Captain D. R. Hamilton, A.M.S., has been appointed to have charge of the Civil Medical duties at Dum Dum, in addition to his own duties, during the absence on leave of Surgeon-Captain M. Morphew, or until further orders. Surgeon-Captain H. A. Stalkartt, A.M.S., has been appointed to have Medical Charge of the Civil Station of Dinapore in addition to his own duties, vice Surgeon-Captain B. K. Basu, transferred.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff Surgeons: J. C. F. Whicher to the *Scout*; H. J. McC. Todd to the *Caledonia*; and J. R. McDonald, M.D., to the *Flora*. Surgeons: H. St. D. Griffiths to the *Barrosa*, and for charge of the *Flood* on the way out; G. McGregor to the *Vernon*; and O. Rees, M.D., to the *Pembroke*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain John P. Atkinson, M.D., and Surgeon-Captain John P. Massingham to be Surgeon-Majors.

MEDICAL STAFF CORPS.

A concert was given by the detachment of the Medical Staff Corps at the Station Hospital, Gibraltar, in commemoration of Her Majesty's Diamond Jubilee by permission of His Excellency the Governor and the Principal Medical Officer, Surgeon-Colonel Catherwood. The stage was erected in the patio of the hospital, and over it was displayed a picture of Her Majesty illuminated by lamps. The convalescent patients were allowed to attend the concert, a privilege which was much appreciated.—No. 9 Bearer Company and No. 4 Field Hospital, made up to war strength, assembled at the Curragh Camp on the 13th inst. for field training. The

Bearer Company is commanded by Surgeon-Major J. Grove Crofts, the officers for duty being Surgeon-Captains J. S. Green and V. Davoren. The Field Hospital is under the command of Surgeon-Lieutenant-Colonel J. C. Dorman, Surgeon-Majors R. D. Donaldson and H. A. Haines, Surgeon-Captain E. G. Browne being one of the duty officers.—The annual sports of No. 12 Company (Woolwich) were held on the 8th inst. at Charlton-park, and included corps competitions illustrating the various modes of dressing and removing the wounded on the battle-field. Among the company present were Surgeon-Major-General and Mrs. Jameson, Surgeon-Colonel and Mrs. Ferguson, Brigade-Surgeon-Lieutenant-Colonel and Mrs. Fawcett, Brigade-Surgeon-Lieutenant-Colonel Allin, Colonel Yorke, R.A., and many other officers of the garrison. Surgeon-Major Bedford acted as judge in the corps competitions. At the close of the meeting the prizes were distributed by Mrs. Fawcett.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Surgeon-Lieutenant S. W. Woollett to be Surgeon-Captain. 1st Ayrshire and Galloway: Thomas Easton, M.D., to be Surgeon-Lieutenant. *Royal Engineers* (Volunteers): 1st Lanarkshire: Surgeon-Captain A. Mechan, M.B., to be Surgeon-Major. *Rifle:* 3rd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Lieutenant A. W. Dalby to be Surgeon-Captain. 5th Volunteer Battalion the South Wales Borderers: Charles Evan Humphreys, gent., to be Surgeon-Lieutenant. 1st Nottinghamshire (Robin Hood): Robert Plenderleith Shearer, M.B., to be Surgeon-Lieutenant. 22nd Middlesex (Central London Rangers): Surgeon-Lieutenant G. Herschell, M.D., to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Woolwich Company: Thomas William Bartlett, gent., to be Surgeon-Lieutenant.

DEATH OF SURGEON REGINALD JAMES FYFFE, R.N.

Surgeon R. J. Fyffe, M.R.C.S. Eng., L.R.C.P. Lond., of H.M.S. *Rattler*, died under distressing circumstances on July 12th, at the early age of thirty years. The deceased had only recently returned from the China station, on leave, to be present at the naval review, his home being at Southsea. On July 10th he went to Bratton, near Westbury (Wilts), to his brother-in-law, the Rev. R. S. Jacobs, the vicar. The deceased was riding a bicycle on July 12th to Trowbridge, when he was seen to fall off the machine, and it is surmised that he missed the pedal, which caused the accident. Mr. Fyffe was picked up in an unconscious state, from which he never recovered, and died about eleven o'clock the same evening. At the inquest evidence showed that he had sustained a fracture of the skull, and a verdict of accidental death was returned. Much sympathy is felt in the district at the death of so promising an officer.

A vacancy in the list of Honorary Physicians to the Queen has been filled by the appointment of Surgeon-Major-General William Roche Rice, M.D., C.S.I., late chief of the Indian Medical Department, Sanitary Commissioner with the Government of India, and in earlier years Chief Inspector of Hospitals in the North-West Provinces and Oudh. He joined the service in November, 1856, and has the medal for the Indian Mutiny.

Correspondence.

"Audi alteram partem."

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

To the Editors of THE LANCET.

SIRS,—I have to-day received a letter from Professor Roth in which he states (*a*) that cheques of £1 are received in full discharge of the membership subscription; (*b*) that the preparation of the free railway tickets in Russia and the *cartes de legitimation* is in active progress, but that delay is occurring from the want of exact information from members as to the route chosen by them in entering and leaving Russia; and (*c*) that in a few days a fresh supply of the pamphlet "Renseignements divers" will arrive. To meet the second difficulty a small form, to be sent at once to Professor Roth, has been prepared and issued to every member who has received his form of inscription from me, and copies of this form will be issued to anyone requiring them.

I am, Sirs, yours faithfully,

G. H. MAKINS.

47, Charles-street, Berkeley-square, W., July 19th, 1897.

"CYCLING FOR WOMEN: ITS EFFECTS ON PARTURITION."

To the Editors of THE LANCET.

SIRS,—The opinion given by Mr. J. W. McVitie in THE LANCET of July 3rd as to the effect of bicycle exercise on parturition seems to be rashly gratuitous when only based on observations that have been made on two cases; but, more than this, it is one that may be calculated to arouse some misgiving, and even fear, in a section that is very largely represented in cycledom. Such an idea may go far towards casting into disrepute a form of exercise that is now universally recognised as being of very considerable value. The evidence upon which Mr. McVitie bases his conclusions is, indeed, slender—if he is not altogether mistaken about his instances. In the first place, primiparous cases almost invariably exhibit delay during the second stage of labour, whether they be cyclists or not, and therefore it would seem almost absurd for such cases to be taken for the purpose of advancing an alarming theory. But your correspondent exposes himself to controversion on a point of simple physical and physiological effect. The long-continued or oft-repeated pressure of a saddle would not render the perineum "unusually tough and unyielding." To argue that it would do so is merely to indulge in hasty speculation. If the pressure were sufficient to cause an amount of perineal muscular inaction, then the result would be the very opposite to that complained of; there would be atony and want of resiliency, instead of tone and increased resistance. And, on the other hand, if the movement of the perineum on the saddle exercised the muscles to the extent of an over-development of them, then, other things being equal, if the parturient cases were "of good physique" and had the ordinary expulsive forces unimpaired no unusual opposition to the passage of the child would be encountered. Instances go to show that the higher the muscular development the more perfect is any function that is concerned. Savages go through child-birth with much greater ease that do the more civilised, and the tone and development of their muscular system ensures a more rapid and perfect involution. It is extremely likely that cycling is an advantage rather than a disadvantage in the particular respect under consideration as well as in others, and that excessive riding, either on account of atony caused by the pressure thereof or through muscular development induced by the exercise, helps rather than hinders.

Mr. McVitie applied short forceps to his cases "without tearing the perineum in the slightest." Does this argue in favour of his skill, or is it the plainest proof that there was nothing "unusually tough or unyielding"? Perhaps it indicates both, but most assuredly the latter. If the perineum in each of his cases had been so unusually tough and unyielding as to cause delay during the second stage then it would almost certainly have given way under the strain of instrumental assistance. The class of case that exhibits an inordinately rigid perineum is that affected by age. A patient approaching forty years of age will generally suffer considerable delay, and her perineum will commonly tear under the use of forceps. There is toughness and rigidity, not on account of muscular atony or even through exercise and development, but on account of age pure and simple.

The advantages of cycling are so great—and none the less to women who contemplate marriage as well as those who may be living in their first years of married life—that it would seem to be undesirable that a pet diversion should have a stigma thrown upon its character unless the circumstances upon which it is founded are overwhelming and convincing. Cycling has saved many lives in both sexes, and no section has derived more benefit from the exercise than that consisting of the married and those about to marry. It would be monstrous if the idea were widely disseminated that such a class should strictly limit the amount because

certain primiparæ displayed symptoms that, after all, most practitioners have to deal with in all primiparæ.

Mr. McVitie's warning against "immoderate use of the wheel" is a good one for all ages and both sexes, but he should not proceed to abstract from the general bliss of a married existence one of the most enjoyable, popular, and healthful exercises ever made fashionable by throwing out such an awe-inspiring warning as he has without further reason than that given. Such a theory as he has presented might not only help to limit the amount of cycling in a particular section, but would most likely conduce to an unpopularity quite incommensurate and entirely undeserved.

I am, Sirs, yours faithfully,

Buckhurst-hill, July 5th, 1897. HAYDN BROWN.

"SOME NOTES ON THE LATE GRECO-TURKISH WAR."

To the Editors of THE LANCET.

SIRS,—In justice to my colleague Mr. Abbott, I should inform you that it was he who was in charge of the whole English expedition in the Greco-Turkish War, and had control of the larger Hospital at Chalkis. I would also add that Sir William MacCormac is the chief surgeon of the St. John Ambulance, whereas I am only chief surgeon of the Metropolitan Corps.

I have the honour to be, Sirs, yours obediently,

10, Maddox-street, Regent-street, W. SAMUEL OSBORN.

"THE VALUE OF AN EXCLUSIVE RED MEAT DIET IN CERTAIN CASES OF CHRONIC GOUT."

To the Editors of THE LANCET.

SIRS,—Mr. William Armstrong's paper under this heading in THE LANCET of July 3rd has shown the good that can be done by sometimes using what on the face of it appears to be a theoretically wrong diet. Reasoning as the writer does on the subject of auto-intoxication the diet has much in its favour; its results are good in his practice.

Speaking of children in whom the uric acid diathesis is sometimes very marked, I will give a case in my own practice which supports the assimilation theory. A child at two days old passed a quantity of red urine which alarmed the nurse, so much so that she saved me a specimen which on being tested was found to contain pure uric acid crystals. This urine was constantly being passed by the child, who screamed a great deal, had flatulence and sickness, and seemed very miserable altogether. The mother's milk was rich in cream, but turned acid rapidly. Careful dieting of the mother had no effect on the child for good. I found eventually that no milks would agree, so I abandoned milk and put the child on mutton juice. This agreed perfectly, the crying and sickness ceased, the general aspect of the child changed for the better, and the uric acid ceased to be marked after twenty-four hours of mutton-juice feeding. I gradually brought the feeding back to a sterilised cream mixture; the child is now well and taking food without difficulty. Curiously enough the family history of this infant reads like a list of Spa patients—viz., paternal grandmother has rheumatoid arthritis; the father has passed quantities of uric acid calculi; the mother has what Sir Willoughby Wade would call gouty neuritis accompanied by acid dyspepsia.

When Dr. Eustace Smith introduced meat-juice feeding he saw the wonderful way in which the albumin was assimilated, and I am quite convinced that it is in cases of uric acid diathesis that milk-mixed carbohydrate diets often disagree. Beef-tea I never give to children, as I only see harm from its use. In several other cases of children unable to digest milk well I have noted uric acid, but the family history is not so marked. When one considers that sugar, which is almost harmless in itself, can (as Sir Dyce Duckworth has pointed out) by setting up fermentation produce flatulence and acidity, it is obvious that carbo-hydrates may retard stomach digestion by acting as diluents alone, as well as by improperly fermenting and throwing the whole digestive tract out of gear by sending into the duodenum a fermenting mass, the toxins of which are absorbed—veritable taskmasters to an overworked system. Sir William Roberts has called attention to the value of mixed diets, and they certainly are more comfortable than the single red meat and water or vegetarian; but in the special cases mentioned by Mr. Armstrong the microbes must be mastered.

I am, Sirs, yours faithfully,

LENNOX WAINWRIGHT, M.D. Brux., &c.

Folkestone, July 19th, 1897.

CERTAIN POINTS IN THE CAUSATION AND TREATMENT OF SPINAL CURVATURE.

To the Editors of THE LANCET.

SIRS,—In a paper recently published on the above subject Mr. Barwell again draws attention to the condition which he terms "amesial pelvis," and he alludes to a figure of this condition in the last edition of his work on Spinal Curvature. In a work on the same subject now in the press I have discussed this condition, and I have shown that the "amesial pelvis" is not the whole story. Briefly the facts are these. Mr. Barwell has only taken his plumb-line from the "vertebra prominence," and noticed that the rima natium is to one or other side of it. If Mr. Barwell had taken the plumb-line from above the patient's head to the ground between her feet he would have found not only the pelvis but also the whole body amesial. The figure he alludes to in his book has the plumb-line passing through the middle line of the head to midway between the heels. This I believe to be a most unusual condition for a curvature patient. Mr. Barwell's account of how he arrived at this diagram explains the error. She was examined "piecemeal," "and the result embodied in an outline sketch." If in his second figure a vertical be drawn up from between the knees, it will not pass through the middle line of the head, but very much to one side of it. It would pass still more to one side if drawn up from between the heels. Therefore the head as well as the pelvis and all the intermediate portions are amesial. This condition I have found to be nearly if not quite universal in cases of lateral curvature. As to the reason of this amesiality, I believe it has its first cause in general muscular weakness. The body bends to one or other side because the muscles are not strong enough to hold it straight, much as a willow stick bends to one or other side when stood on end, whilst a brass rod of the same diameter would remain straight. The side to which the amesiality occurs, depends on any cause, such as an habitually bad position, which weakens the ligaments on one side of the spine by frequently over-stretching them. Once amesiality has commenced, curvature has begun. Amesial pelvis is, therefore, but a part of a general amesial condition. This amesiality causes an inequality in the amount of weight borne by each foot. If Mr. Barwell will examine the boots of his second case with amesiality to the right he will probably find that the outer side of the right sole and the inner side of the left show most signs of wear. I can quite corroborate Mr. Barwell's statement that the amesial pelvis "is generally also oblique." It must be so if the legs are of equal length. This is obvious from ordinal mechanical considerations.

Mr. Barwell has undoubtedly proved the uselessness of most spinal supports. The revulsion of opinion has, as usual, gone too much the other way, and I should like to say a good word for Fig. 3 in his paper. This is one of the modifications of the late Mr. Chance's instruments, and is notoriously very largely used by another eminent spine specialist. At the present time I am treating several patients with them, and though I am even more alive than Mr. Barwell to the amesial pelvis, I do not find it a bar to fitting the instrument and getting a great deal of good from it. The plates are not meant to act "with sufficient power and constancy to have an effect on the most prominent part of the curve," nor *when properly applied* can one "with the greatest ease sway the whole thing from side to side." What is claimed for these instruments, I can testify that they do: (1) they keep the spine in as upright a position as possible, for flexion increases the deformity and especially increases the rotation; (2) this is done by shoulder-straps, which only prevent the shoulder from falling forwards and do not otherwise limit their movements; (3) this constant keeping back of the shoulders tends to develop the flattened chest, removes stoop, and therefore cures part, whilst it removes an active cause, of the deformity; (4) they limit movement into a worse position when the patient is erect, and when at rest

they form a portable spinal chair on a principle I have described elsewhere; (5) they do not limit, but rather tend to produce, movement into a better position and are, therefore, actively curative. It is not my object to advocate their use for all cases of curvature, such as, I believe, has been done. In a certain minority of cases I have found them useful adjuncts to other treatments.

I am, Sirs, yours faithfully,

Folkestone, July 18th, 1897. PERCY G. LEWIS.

FACTORY GIRLS' COUNTRY HOLIDAY FUND.

To the Editors of THE LANCET.

SIRS,—You were good enough last year to substantially help the Factory Girls' Holiday Fund by publishing an appeal on its behalf, and we trust that you will again grant it a similar favour. As might have been expected in view of the heavy demands which have been made this year upon our sympathy and resources, the amount of support the fund has received is as yet quite insufficient for its work; but we earnestly appeal to the generous not to allow our year of rejoicing to bring disappointment to the hundreds of poor women and girls who are at this moment eagerly counting upon a week or fortnight's escape from the unchanging drudgery of their toiling lives. The conditions of modern industry make it a sad necessity that women must work as hard as men, and as a result our hospitals are full of overworked and underfed women and girls. On the principle that prevention is better than cure it is wished to give as many of them as possible the chance of breathing pure air, of having good food, and of enjoying the unwonted luxury of rest for at least one week of their weary year. Short as the holiday is it makes a wonderful change in the pale, dull-eyed workers, and all who help would feel well repaid to see the sunburnt, happy faces that come back to work. We know the physical benefit it is to them, and we know the happy memories of their short stay in the country does something to soften and purify their hard lives in London.

Subscriptions will be gladly received by the honorary secretary, Miss Canney, St. Peter's Rectory, Saffron-hill, London, E.C., or by the honorary treasurer, Miss M. Wyatt, 1, Routh-road, Wandsworth-common, S.W.

We are, Sirs, yours obediently,

HENRY SCOTT HOLLAND. ROBERT F. HORTON.
ELIZABETH GARRETT ANDERSON. FRANK LLOYD.
H. ADLER, Chief Rabbi.
M. C. TREVOR. EDWARD CANNEY, Chairman of the Executive Committee.
NORFOLK.

July 19th, 1897.

*** DR. BYROM BRAMWELL has written to us pointing out that one sentence in our leading article of July 10th on Aphasia and Disorders of Speech "might be likely to convey to the readers of your article the idea that my views as to the action of the right hemisphere were formed subsequently to, and based upon, Dr. Bastian's lectures." We have, therefore, pleasure in stating that the simultaneous publication in our columns of Dr. Byrom Bramwell's papers and Dr. Charlton Bastian's Lumleian Lectures was an accidental coincidence due to the fact that the great pressure on our space inevitably leads every now and then to delay in the insertion of contributions, more especially when they are of such a length that they can only appear in successive issues of THE LANCET. Dr. Byrom Bramwell's series of cases of aphasia was an instance of this kind, the manuscript having been in our hands for a considerable time (several months) before the first instalment appeared in our issue of March 20th last; it was completed in eight articles, the final one of which was contained in our issue of May 22nd.—ED. L.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD, LONDON.—The Goldsmiths' Company and the treasurer of the hospital, Mr. Hope Morley, have respectively sent £100 and 50 guineas to the Royal Chest Hospital, City-road, E.C.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Society of Chemical Industry.

THE annual general meeting of the Society of Chemical Industry was held on the 14th inst. at the Owens College, under the presidency of Dr. Edward Schunck, F.R.S., who gave a most interesting address. A large portion of it consisted of personal recollections of some of the most notable men connected with the history of chemical technology in the Manchester district, especially of Dr. Dalton and Dr. Charles Henry, who practised for some time as a physician in Manchester. He was a favourite pupil of Dalton, and after a time gave up the practice of medicine for that of chemical manufacture, in which his family had been successfully engaged for some generations. His grandfather was the first to prepare the so-called "Henry's magnesia," the distinctive merit of which consisted, according to Dr. Schunck, in its forming with water a soft, milk-like emulsion, without any grittiness, giving no deposit even on long standing. This property was said to be due to precipitation with potassium carbonate in place of sodium carbonate, and to using the solution of magnesia in a very concentrated state, "a proof, if correct, of how often success in manufacturing manipulation depends on minute details." Dr. Charles Henry wrote a life of Dalton, "a classic production, forming one of the most important volumes of the Cavendish Society's series," and to him Dalton bequeathed the whole of his scientific apparatus, which was afterwards given to the Manchester Literary and Philosophical Society, in whose rooms it is still to be seen.

Incidentally the colouring of pickles was referred to in connexion with the chemistry of chlorophyll. The opponents of what Dr. Schunck speaks of as the "so-called adulteration" producing "the much admired vivid green colour" say that it is produced by the addition of some salt or compound of copper. He says the point to be determined is whether the quantity of copper present is "as injurious as has been represented." The green colour is that of a derivative of chlorophyll—cupric phyllocyanate—which has a considerable tinctorial power. Most vegetables contain less than 1 per cent. of chlorophyll, which itself "yields by decomposition a not very large amount of phyllocyanin, and that the cupric phyllocyanate contains, according to my determination, only 9 per cent. of copper, and when we consider, moreover, that the copper is contained in the cupric phyllocyanate in a form in which it cannot be detected by ordinary reagents, then, I think, we may arrive at the conclusion that the small quantity of copper contained in a green pickle or vegetable cannot be very injurious." He goes on to say, however, that the mischief is "that the pickling vinegar, containing usually an excess of copper salt, is allowed to stand in contact with the pickles, and may be taken with them to some extent." The conclusion he comes to is that if this vinegar is poured off, the vegetable washed with water, and this also poured off before fresh vinegar is added, "then I feel convinced any quantity of the product may be eaten with impunity." Very consolatory to the devourers of pickles, but it would be better to have them without copper, even though in the form of cupric phyllocyanate.

Dr. Schunck also referred to the condition of the Ship Canal. He said that when Manchester was smaller and sanitary conditions not much thought of "it seemed only natural that our one river should carry away the sewage and waste water of the town to the sea," but now the effluent water is impounded in the Ship Canal, where it ferments and decomposes, giving off fœtid gases. With regard to purification, all that he thinks certain is that a successful scheme, even if possible, is sure also to be costly. Then follows some curious reasoning. Some of a sceptical turn may ask if there is evidence to satisfy a scientific inquirer that our polluted streams are as injurious to health as is sometimes asserted. Sentimental and æsthetic objections must not be brushed aside as of no importance, because what depresses the mind affects also the bodily health; "but the question is whether we are justified, except on the highest and most urgent grounds, in saddling the towns and manufacturers of Lancashire—in face of a declining trade—with the enormous outlay which, according to experts, would be necessary to effect the purification of our rivers to the satisfaction of the authorities." Dr. Schunck does not tell us

what death-rate, what amount of ill-health and depression—most costly as they are to a working population—he would require before cleansing our rivers It is not encouraging to hear that he has no doubt as to the increased pollution of the air by coal smoke, and that it is much greater than it was years ago. Sometimes it is contended that this is due to the number of small tenements erected of late years, but he is certain that "the chief part of the smoke comes from factories and works," and it is satisfactory to find that he thinks it "is a disgrace to our manufacturers, a disgrace to our municipalities, a disgrace to the community generally." We may hope that his audience took this to heart, for chemical manufacturers are among the greatest polluters of the air of Manchester, and not long ago sought special privileges as to evolving smoke. Dr. Schunck, noting the much greater purity of the air after rain, suggests the possibility of producing artificial showers by means of a rose attached to the end of a water-hose to wash down the suspended carbon, the sulphurous acid, and other impurities, at the same time watering the streets. When this is carried out Manchester will more than ever deserve its reputation of being a rainy city.

July 20th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Rabies and the Muzzling Order.

IT is with much regret that I have to record the occurrence of a serious accident to Dr. Allen, Professor of Physiology at Mason College, on Sunday last. It seems that a fox-terrier dog without a muzzle had been lurking about the district of Dr. Allen's residence for some days, and on Sunday found its way into the drive approaching the house. Dr. Allen offered some water to the dog, whose excitement was increased by being followed by a number of children. This the dog refused, and Dr. Allen, fearing for the safety of the crowd, put on a pair of kid gloves and seized the dog by the back of the neck, forcing it into the stable. During the struggle the dog bit Dr. Allen twice on the right hand and once on the left. The dog was afterwards killed by the police and its body examined by a veterinary surgeon, who pronounced that it had been the subject of rabies. A portion of the remains was packed up and sent to the Pasteur Institute at Paris, whither Dr. Allen proceeded at once for treatment himself. The many friends of Dr. Allen are hopeful that his injuries may not be serious and that the result of his journey to Paris may prove beneficial and permanent.

Epidemic of Brutality.

The periodic element of ruffianism which seems to be endemic in large towns has broken out recently in the midst of the city, as shown by violent attacks upon the police. Last Sunday night the disturbance resulted in the death of a fine young policeman, whose head was fractured by a brick thrown by one of the crowd. The patient, aged twenty-eight years, was conveyed at once to the General Hospital, where he succumbed in four hours, not regaining consciousness. These savage attacks upon the police in the execution of their duty demand prompt and even drastic measures from the authorities. Law-abiding people are not safe and dread certain localities of the town after daylight hours, when drunken and disorderly mobs of roughs make the neighbourhood dangerous. A salutary punishment of a number of the residuum of this class would do more to suppress these disturbances than the appeals to humanitarian sentiments which generally accompany the magisterial sentences.

Lavatories for Females.

The Public Works Committee have decided to erect two lavatories in the centre of the city for the convenience of females. The necessity for this action is obvious from a sanitary point of view, and if well managed and properly kept no doubt they will add to the comfort of a large number of people.

The New General Hospital.

On the invitation of the medical staff, the day after the opening of the hospital by Princess Christian a large number of the profession were entertained and shown over the new buildings. Some three or four hundred responded and evinced their approbation of the admirable arrangements made for the reception and treatment of patients. The adaptation of the various parts of the building for the purposes intended gave unqualified satisfaction. Much interest was shown in the chapel, which is fitted with beautiful marble, the gift of Mrs. J. C. Holder, and in the fittings of the children's wards, which have been mainly carried out by the girls of King Edward's High School. Considerable advance has been made towards the completion of the building, and it is hoped that it will be ready for patients by the end of September. The details are infinitely numerous, and require constant supervision which is ably supplied by the committee and house governor, Mr. Collins.

July 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Anderson's College Medical School, Glasgow.

THE governors of this school have decided not to re-appoint Dr. Campbell Black to the chair of Physiology. Dr. Black has occupied the chair during the last six years. From a correspondence printed in the *Glasgow Herald* it appears that some difference of opinion has arisen between Dr. Black and the governors in reference to certain addresses which Dr. Black delivered to his class, and which were reported in the public prints. A committee was appointed to meet Dr. Black, and though, according to his published statement, he "besought instruction in the matter" the issue is as stated above. The chair is now advertised as vacant.

Glasgow and the British Association.

At a meeting recently summoned by Lord Provost Richmond, and attended by representatives from the magistrates, the University, St. Mungo's College, the Philosophical and other scientific societies, it was unanimously decided to invite the British Association to meet in Glasgow in the autumn of 1901. The date selected is the year in which Glasgow is to have its second international exhibition. The first exhibition was in 1888, the year when the British Medical Association held its annual meeting in the city.

Medical Appointments, &c.

Mr. J. A. Anderson, M D. Glasg., and Mr. Andrew Cluckie, M.B. Glasg., have been elected district medical officers by the Stranraer parish council. Mr. J. Duffus, M.D. Aberd., and Professor J. G. McKendrick have been admitted to the commission of the peace for the county of Kincardine.

Model Lodging-house, Aberdeen.

Rapid progress is being made with the construction of the corporation lodging-house, East North-street, Aberdeen, where 261 male lodgers will be accommodated. The scheme is being carried out under the Housing of the Working Classes Act. The total cost of the buildings will be £12,000, and the town council entered into contracts just in the nick of time, the prices for building work having greatly increased since then. There are in all five blocks, three of which will be four storeys in height. The front dressings are of fine white granite, and those in the back walls are of red granite. There is a large amount of masonry work in the contracts. The reading and recreation rooms, lavatory, and bath accommodation, and the lighting and ventilation will be excellent, so that the lot of the "dosser" who is able to pay the fee expected will be a great improvement on the previous state of affairs among the itinerant population in Aberdeen. The undertaking will be a source of considerable profit to the corporation. Messrs. Marshall and Dick, Newcastle-on-Tyne, are the architects of the buildings, and Mr. John Ogilvie is inspector of works for the corporation.

July 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Dublin Sanitary Association.

AT the last meeting of the council of the Dublin Sanitary Association the President, Dr. J. W. Moore, Mr. Frank Newell, one of the honorary secretaries, and Mr. Jonathan

Pim, were selected to represent the association at the approaching twelfth annual meeting of the International Medical Congress at Moscow.

Pauper Nursing at the North Dublin Union.

The city coroner held an inquest on the 20th inst. on the death of a child, aged five months, who died in the institution, and who was found in a half-starved condition. During the inquiry it transpired that the child, who was an orphan, was left in the charge of unskilled and pauper nurses. The jury, after a long investigation, found a verdict of manslaughter. This will probably have the effect of directing public attention to the state of things which prevails in connexion with union nursing.

The Coombe Lying-in Hospital, Dublin.

At the recent annual meeting of the friends and supporters of this old-established institution the master (Dr. Kidd), in submitting the report, called attention to the fact that among the 418 patients treated in the internal midwifery department during the past twelve months the mortality was *nil*. In other words, no death occurred.

New Police Cells at Belfast.

At an inquiry held in Belfast on July 15th by the inspector of the Local Government Board the Belfast Corporation applied, among other things, for leave to borrow £11,000 on the proposed new police cells, which are so desirable, the present arrangements being in a very unsatisfactory state. There are to be 51 cells for the accommodation of 107 prisoners—namely, 19 single cells for males and 4 for females, and 18 large cells for males and 10 for females, each capable of containing three prisoners. There are to be new offices for the Commissioner of Police, the detective department, a medical man and matron, and all the most recent improvements will be embodied in the plans.

The Infectious Diseases Hospital, Belfast.

Dr. Clibborn, the medical inspector of the Local Government Board, held an inquiry on July 19th in Belfast as to the suitability of the proposed site at Purdysburn for the new infectious diseases hospital. The chairman of the Public Health Committee (Alderman Graham, M.D.) having given evidence in support of the situation, Dr. Clibborn said that he had received a printed memorial from a number of medical men of Belfast objecting to the site on various grounds, but, properly speaking, as they were not there he did not think he should go into that; but, to prevent any discussion afterwards, or any statement to the effect that the views of those objectors were not taken into account, he would ask Alderman Graham's opinion about certain statements in the memorial. The main objection was in reference to the distance from the centre of the city—four miles; but Alderman Graham gave statistics of other places in which the infection hospital was also at a distance from the towns. He also added that the Ulster Medical Society has unanimously come to a conclusion that they would offer no further objection to the site. The President of Queen's College had also written a letter opposing the site, and the medical inspector said that if he had been present he would have been very happy to have heard him. The Corporation ask a loan of £20,000, and Dr. Clibborn will report on the whole matter.

A Question of Fees for Expert Evidence.

Last week, at the Cork summer assizes, Dr. O'Connell, dispensary medical officer, Castlemartyr, appealed from a decision of the Recorder dismissing a claim of one guinea which he sought to recover from the Midleton Board of Guardians for attending a sanitary prosecution on behalf of the guardians. The defence was that the fee of one guinea was included in the salary of £25 paid to the plaintiff as sanitary medical officer of the union. After arguments on both sides his lordship, Mr. Justice Murphy, said that as the Medical Association appeared to be practically the plaintiffs in this action, and as the question was a serious one, he was prepared, if necessary, to state a case, but his present impression was that the law was with the defendants, and that the fee was included in the fixed salary of £25 as sanitary officer. He would let the case stand for some time to give the plaintiff an opportunity of considering whether he would have a case stated.

July 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Serum Treatment of Plague.

AT the Academy of Medicine M. Roux read for the writers the long report of MM. Wyssokowitch and Jobobat upon the plague in Bombay. These gentlemen made exhaustive experiments in the laboratory which they set up immediately upon their arrival, and reported that the first cases were all bubonic in character, but that later the type changed and pneumonia became the prominent symptom. They found general hypertrophy of the lymphatic system to be common, and due rather to the swarming of the bacilli than to any hyperplasia of tissue. In the pneumonic cases, as would be expected, the bronchial glands were attacked. In the intestines they found punctiform hæmorrhages, while the mesenteric glands were engorged, but according to MM. Wyssokowitch and Jobobat these lesions were all secondary to the general "*septicémie pesteuse*." The bacillus they considered to obtain entrance both by the integument and by the mucous membrane, so that while external buboes were formed a fatal pulmonary condition could be set up at the same time by the affection of the bronchial glands. In support of their hypothesis that the bacillus can traverse healthy skin they conducted some experiments upon macaque monkeys, which are very susceptible to plague, the slightest scratch made upon the palm of the hand of one of these monkeys with a needle dipped in plague culture causing bubonic plague to develop without it being possible to detect the original scratch. The result of their experiments was to convince them that the healthy skin could be traversed by the bacillus. The plague they found could be artificially produced in the pneumonic type by introducing the poison into the trachea under chloroform, but the mucous membrane of the œsophagus and stomach were more resistant, supporting their view that the punctiform hæmorrhages found post mortem were part of a general condition, and were not a spread of local mischief. With regard to the protective action of the serum MM. Wyssokowitch and Jobobat treated monkeys with variable quantities of Yersin's preparations, but the state of immunity when reached did not last for more than ten or fifteen days, and a like temporary result was arrived at when a method proposed by Haffkine, in which the culture to be injected was sterilised by heat, was employed. The immunity in each case appeared to commence immediately after the injection. The importance of these observations seemed to them to lie in the fact that it was possible to immunise the human subject for definite periods by repeated injections. With regard to the curative action of the serum, they experimented with ninety-six monkeys, which they inoculated and then injected at varying times and in varying doses. From their experiments they concluded that careful dosage, and especially early employment of the serum, were necessary for the success of the treatment. When the injection was made during the first two days of the attack the serum seemed to have its full curative power. Later in the disease it lost its efficacy, although improvement had been observed up to the sixteenth or eighteenth day. On the whole, they considered that mortality from plague might be diminished by one-half by employment of the serum, although the pneumonic form was not affected by the injection but remained uniformly fatal.

X Rays and Tuberculosis.

M. Bergonié, of Bordeaux, has recently made some researches into the action of the x rays upon the progress of pulmonary tuberculosis. The patients were laid out on beds, and the surface of the skin being covered with a light covering the Crookes's tube was placed over the affected region at a distance of twenty centimetres. The exposures lasted for ten minutes and resulted in no erythema or injury to the skin. In five of the patients only was the treatment persevered with. In two of these, where acute phthisis chanced to be aggravated by the results of alcoholism and poor living, there was no improvement whatever either in the general or the local conditions. Three chronic cases of pulmonary tuberculosis showed some amelioration of general condition, but no alteration at the seat of mischief and no arrest of the disease. In three other cases the rays

had no appreciable action. The bacillus of Koch seems not to have been modified in its behaviour, an observation which was supported recently at the Biological Society by M. Blaise, who read a note affirming that the x rays had absolutely no action whatever upon microbic cultures.

France and Foreign Medical Students.

At the Municipal Council a resolution has just been adopted that the Government should be asked to annul the by-law of two years' standing under which foreign students desiring to study medicine in France were sent to the provincial universities. Previously to this by-law the foreign student was in a better position than the French student because he was not compelled to serve three years in the army or to pass a matriculation examination of equal severity. As a set off to this great advantage foreign students were therefore drafted to the provincial centres instead of being permitted to work at the *Faculté de Paris*. But more recently a rule has come into force whereby the degree of Doctor of Medicine shall only give the right of practice in France or French possessions to such students as shall have passed the usual French preliminary examinations and have served three years in the army. Native talent is considered by the Municipal Council to be sufficiently protected now, and the Prefect of the Seine has promised to communicate this view to the Government. The commencement of the next November session will therefore probably see foreign students again inscribing their names at the *Faculté de Paris*, but the degree which they expect will not give them the right to practise in France unless they conform to the new regulations.

July 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Poisoning by the Fumes of Nitric Acid.

ON May 17th a serious fire, caused by the bursting of a carboy filled with nitric acid, broke out on the premises of the well-known chemical factory of Bayer and Co. in Elberfeld. The conflagration very soon involved the whole building where the stock of this chemical was kept, and a high wind drove the smoke and fumes towards the firemen, who were immediately seized with violent cough, dyspnœa, nausea, and headache, rendering it necessary for them to be relieved every few minutes. Strange to say, the men who were thus attacked soon felt quite well again, so that they were able to continue on duty and to walk home when the fire was over, but after several hours thirteen of them developed symptoms of poisoning, the consequence being that eleven were taken to the hospital, whilst two died before they could be admitted. Dr. Künne, chief physician to the hospital, has described the cases in the last number of the *Deutsche Medicinische Wochenschrift*. The symptoms differed much in their intensity, but all the patients suffered from dyspnœa, vomiting, cyanosis of the skin, sopor, and clonic convulsions. The heart's action was at first accelerated, but within a few hours became very slow, making only from forty-five to fifty-four beats per minute; sometimes the pulse was irregular. All the patients, even those who did not cough very much, complained of oppression in the chest and great pain near the sternum. This was followed by severe bronchitis, the expectoration being sometimes of a yellow colour and sometimes tinged with blood. Some of the patients had a difficulty in swallowing, due to inflammation of the fauces. Of course they were unable to sleep, but only a few became feverish. Albumin was found in the urine of three of them for periods varying from three to eight days. Seven of the men recovered completely within ten days, but the remaining four were very weak and off duty for about a fortnight longer. It appears from these cases that nitric acid has a very injurious influence on the human body, and that the opinions to the contrary effect formerly held by some medical men were erroneous; the nature of the chemical substance which is formed when it is introduced into the blood is not yet known, but it obviously affects the vaso-motor and respiratory organs, the kidneys, and the nervous system. Medical treatment is restricted to the alleviation of symptoms. Fires in chemical works are often extremely dangerous to firemen. An occurrence similar to that at the Elberfeld factory happened recently in Schering's chemical works in Berlin, when no less than three officers and sixty men of the fire brigade showed symptoms of poisoning, and were rendered unfit for duty; their cases, however, have not yet been described in the medical journals.

Vaccination and Tuberculosis.

The Government having asked for information as to whether vaccination makes the individual more liable to tuberculosis, the scientific committee of the Royal Medical department (Wissenschaftliche Deputation für das Medicinalwesen) has given the following opinion. Tuberculosis being the most frequent of all existing diseases a considerable number of vaccinated or re-vaccinated persons must inevitably suffer from it sooner or later, but there is no reason for supposing that such persons have an exceptional liability to tuberculosis. If the spread of tuberculosis were caused by vaccination the mortality from it would have increased since the introduction of compulsory vaccination, but the fact is that the army returns prove that tuberculosis has become less frequent since the enactment of the vaccination laws. Diseases produced by a faulty method of vaccination, such as erysipelas, septic infection, &c., may impair the health and render the tissues less able to resist the entrance of the tubercle bacilli; the dissemination of tubercle bacilli previously present in the glands of children may also be facilitated by feverish complications of this kind, but apart from these exceptional cases the opinion that vaccination may be the cause of tuberculosis is erroneous.

July 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Missing Surgeon of the Bottego Expedition.

IN THE LANCET of May 15th, p. 1379, I gave some account of the destruction of Captain Bottego and his expedition, indicating at the same time that the fate of Dr. Maurizio Sacchi, who acted as surgeon to the force, was as yet uncertain. Information just received by the Sacchi family appears, happily, to put his safety beyond a doubt. The moment the disaster that befel the expedition was known they addressed a communication to the Abyssinian Ras Maconnen, begging him to afford them what details he could gather as to the fate of Dr. Sacchi. To that communication they have now had a reply from the Ras himself, written in French, and dated Harrar, June 28th. "Doctor Maurizio Sacchi," he says, "is alive, and in the day now passing is at Shoa." Then follows the comforting assurance: "You may be quite at your ease on his account. No harm will overtake him. When he passes through Harrar I promise you that I shall protect him and assist him to the best of my ability." The joy of the Sacchi family may be imagined, and all Mantua, city and province, the natal district of Dr. Sacchi, is naturally jubilant. It has further been announced that the survivors of the Bottego expedition, Lieutenant Vannutelli and Sub-Lieutenant Citerni, are at present at Adis Abeba, in good health and under the roof of the Italian envoy, Major Nerazzini. According to these gentlemen Dr. Maurizio Sacchi happened not to be with the expeditionary force on the fatal day, having had occasion to detach himself from the main body on its reaching the elevation of Lake Rodolfo. Meanwhile, Italians are commenting with admiration on the courtesy and neighbourly kindness of Ras Maconnen—qualities displayed towards them not for the first time, and, indeed, quite in keeping with all their more intimate experience of King Menelik and his allies.

Anthropometry of the Italian Army.

The colossal armies of the great Continental powers present facilities, otherwise unattainable, for more than one department of anthropological inquiry. Italy, if she has not led the way in utilising those facilities—Germany, I believe, having the priority—has followed suit in a commendable manner. As far back as 1879, at the instance of Lieutenant-Colonel Guida, M.D., the War Office gave instructions that for every soldier on his joining a regiment there should be kept a "foglio sanitario" (sanitary sheet), noting his general physique (colour of hair, eyes, and skin; development of forehead, nose, mouth, and chin; eyesight; the maximum antero-posterior and transverse diameter of the cranium;

stature; thoracic perimetry; and weight); while progressively, throughout his period of service, recording the limits of stature, thoracic perimetry, and weight, repeated year by year; and, finally, registering all the sanitary vicissitudes of which he was the subject. Between 1879 and 1883 the "fogli sanitari" were 300,000 in number, and the War Office charged Captain Livi, M.D., with digesting and analysing the material thus collected. A most instructive and interesting work is the outcome, the title of which I transcribe from the copy now before me for the benefit of those of your readers engaged in anthropological study: "Livi, R——, Antropometria Militare, Parte I., Dati Antropologici ed Etnologici. Con Atlante. Roma." Another publication, now in the press, will take note of the pathological, hygienic, and demographic conclusions to be drawn from the "fogli sanitari," with their suggestions for modifying regulations hitherto in force, for improved methods of recruiting, and thereby for diminishing the "morbosità" (tendency to disease) and "mortalità" of the soldier.

July 18th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The International Medical Congress in Moscow; The Reception by the Czar.

IT has been known for some time that His Majesty the Czar, as patron of the Congress, has consented to receive deputations from all the foreign countries represented at the Congress. The arrangements for the reception have now been made public. It will take place before, not after, the Congress, on Aug. 5th (17th); that is to say, two days before the opening of the proceedings in Moscow. There will be only one representative from each country, his selection being left to the national committee of the particular country. Professor Sklifosovski, the president of the organising committee, will have the honour of making the presentations to the Emperor. It is not stated where the reception will be held, but it will certainly be either in St. Petersburg itself or in the summer palace at Peterhof, where the Czar is at present residing.

The Moscow Municipality and the Congress.

The Executive Committee of the International Congress recently approached the *Duma*, or Town Council, of Moscow, suggesting that it was desirable that the municipal authorities should entertain the members of the Congress at some form of reception or rout. The council has, however, by a small majority rejected the proposal, although it was supported by the "finance" and "social" committees of the council. Instead of entertaining the members the council proposes to commemorate the Congress by instituting an international prize, to be given every three years, for the best work upon Public Health or Epidemiology. The sum set aside for this purpose is 16,450 roubles, or about £1800, and the value of the triennial prize is fixed at 5000 francs, or £200.

Other Arrangements in Moscow.

There will be three general meetings of the Congress, and these are fixed for Thursday, Aug. 7th (19th), Sunday, the 10th (22nd), and Thursday, the 14th (26th) of that month. The Grand Theatre in Moscow was originally proposed as the most suitable place for the general meetings, but it seems that it will only seat some two thousand people; so the first, which is expected to be the largest gathering, will take place in the Nobility Club (*Blagorodnoé Sobranjé*); the other two will be held in the Theatre. The Preliminary Programme of the Congress has just been published, and from this it will be gathered that there will be no lack of material for discussion either at the general or the sectional meetings. Already over 970 communications are promised, and it is rather curious to note that the three sections in which the largest number of papers will be read (if the present proportion be adhered to) are those of Hygiene, Surgery, and Nervous and Mental Diseases, in each of which over 100 papers are at present promised. Those with the smallest numbers are in the sections of Anatomy and Physiology.

Additional Orations at the General Meetings.

A list of the principal orators and the subjects of their communications was published in THE LANCET of May 29th. This can now be supplemented by the following. Professor Virchow's paper will be entitled, "On the *Rôle* of the Vessels in Inflammation"; Professor Lukianof's will be "On Inanition of Cell Nuclei"; Professor Metchnikof will discuss "The Plague"; Professor Robert (of Barcelona) will read a paper on "The Characteristics of Human Pathology in Relation to Therapeutics," and Professor Lannelongue (of Paris) one on "The General Treatment of Surgical Tuberculosis." Professor Danilevski (of Kharkof) will not read one of the orations as originally announced.

Official Representatives at the Congress.

It is said that official invitations to attend the Congress have been sent to the Bavarian Prince Ludwig Ferdinand and the Bavarian Duke Carl Theodore, both of whom are Doctors of Medicine. The names of a large number of official representatives at the Congress of Universities and medical and governmental institutions of all sorts are now published, and of these the following may be mentioned:—Edinburgh University will be represented by Professor T. R. Fraser; Glasgow University by Professors McCall Anderson, Ferguson, Macewen, Cameron, and Yellowlees; Cambridge University by Professor Clifford Allbutt; Dublin University by Professors Finny and Pureer. France will be unusually well represented at the Congress. The Paris Medical Faculty alone is sending fourteen representatives, including such well-known names as those of Professors Potain, Lannelongue, Tillaux, and Le Dentu. The French army and navy will be represented by four medical men, one of whom will be Professor Dujardin-Beaumetz. It may be added that an unusual number of lady practitioners have become members of the Congress.

Reception and Accommodation of Members.

It is stated that twenty-three members of the Congress will be treated as guests of the Russian Court and provided with accommodation in one of the official residences of the Kremlin. The immense *Manége* in Moscow is to be put at the disposal of the Congress, and in this room will be found for many of the special offices in connexion with it. Each section of the Congress will have a separate office here under the same roof. Buffets will be provided, at one of which light refreshments in the form of "butterbrods" and beer will be obtainable without charge by members of the Congress. The reception of members on the first day will take place in the upper *Torgovuie Riadui*—that is to say, in the large new arcade close to the Kremlin. The entertainment given by the medical profession of Moscow to members of the Congress will take the form of a concert, at which the excellent orchestra of the Philharmonic Society will perform. As in Russia the theatres are always closed during the summer months, and the actors and actresses (who are here, as of old in England, servants of the State) dispersed, it has been found impossible to arrange for a gala spectacle in the Grand Theatre, as had at first been hoped.

A Practical Hint.

A few words as to the weather which may be expected in Moscow in the month of August may be welcome to some Englishmen who are intending to come to Russia now for the first time. On the whole the climate of Moscow at that time is not at all unlike that of England at the same period. In both there is a certain element of uncertainty which it is well to be provided for. It is just possible that the week in August during which the Congress is to be held will be very hot, but so late in the summer the heat is scarcely likely to be intolerable. It is far more probable that the weather at that time will be but moderately warm; and the nights, it is more than probable, will be distinctly chilly. No member who brings a warm change of clothing in his portmanteau and a good warm travelling rug will be likely to regret it.

A Proposed International Jenner Society.

Dr. Hubert, Secretary of the Russian National Health Society, and author of the work on Jenner and Vaccination, more than once mentioned in the columns of THE LANCET, intends to propose at the Congress in Moscow a scheme for the formation of an International Jenner Society, for which he suggests the title "Jennerianum." There would, under the scheme, be a division of the society in each country, and the object of it would be to collect observations and statistics upon small-pox and vaccination. This would appear to be an appropriate time for starting a movement of the kind, and the proposed society would be a worthy commemoration of the centenary of Jenner's great work, more particularly if it led to a still wider spread of the practice of vaccination. The details of the scheme will be looked forward to with interest.

St. Petersburg, July 3rd (15th), 1897.

Obituary.

SIR JOHN CHARLES BUCKNILL, M.D. LOND., F.R.C.P., F.R.S., J.P., &c.,

FELLOW OF UNIVERSITY COLLEGE, LONDON; LATE LORD CHANCELLOR'S MEDICAL VISITOR OF LUNATICS.

ON July 20th Sir John Charles Bucknill died, after a long illness, at Bournemouth, aged seventy-nine years. He was born in the year 1817 at Market Bosworth, in Leicestershire, in which town his father, Mr. John Bucknill, was practising as a surgeon. At an early age he was sent to Rugby School, where Dr. Arnold had recently been appointed headmaster. Bucknill did not, however, remain at Rugby very long, but after a year or two was removed to the Grammar School of his native town, Market Bosworth, where he became a day scholar, living at home with his family. About 1835 he proceeded to University College, London, then possessed of the most notable teaching staff—certainly in London, and probably in the world: Samuel Cooper, author of the great dictionary, Robert Liston, and Richard Quain being the surgeons, Jones Quain the anatomical teacher, Robert Carslake the pathologist, John Elliotson and Anthony Todd Thomson being likewise members of the staff. Among his contemporaries at University College Hospital were the late Sir John Eric Erichsen and Sir Richard Quain.

In 1840 Bucknill took the degree of Bachelor of Medicine at London University, being placed first in the honours division in surgery and third in medicine. From the time of his graduation his association with the University was continuous. He became Doctor of Medicine in 1852, and shortly afterwards a Fellow of University College, and was for some years a member of the council of that body. Having qualified he became house surgeon to University College Hospital under Liston, who died shortly afterwards. In 1842 Bucknill married. His wife, who died in 1889, was the only child of Mr. Thomas Townsend, of Hillmorton.

In 1844 what may be truly termed his life's work began. He was appointed first medical superintendent of the new Devon County Asylum, which appointment he held for the eighteen most active years of his life. His work here was marked by a zeal and enlightenment which was a rare feature in asylum management in those days—days when the madman's usual lot taxed even the pen of Charles Reade to describe. His energy and success attracted the attention and earned the friendship of Dr. Daniel Hack Tuke, and it was at this time that the literary partnership which afterwards bore fruit of almost incalculable value to the profession was initiated. While at the Devon County Asylum Bucknill conceived the idea of a periodical journal to be devoted to asylum management. This project saw the light in the form of the *Journal of Mental Science* in 1853 under his editorship. This journal he personally continued to conduct until his retirement from Devonshire nine years later. His next journalistic venture was in 1855, when he founded the short-lived *Asylum Journal*. In 1857 he secured the Sugden Prize for a thesis on "Unsoundness of Mind in its Relation to Criminal Actions," a masterly exposition of the nature and limits of the criminal responsibility of the mentally afflicted, the result of long study and careful observation by one who possessed exceptional opportunities of arriving at the pith and essence of his subject.

Dr. Bucknill's time was not, however, entirely occupied by his asylum work and literary projects. His ever active and alert nature found fresh scope for the exertion of his energies in the direction of the National Defence movement. To him the great Volunteer movement of 1852 in no small degree owed its origin. Early in the year a meeting was convened at Exeter, presided over by Lord Fortescue, to consider the necessity for the enrolment of a corps of citizen soldiers, especially with relation to coast defence. It was pointed out that the last successful invasion of England—namely, that by William of Orange—was achieved by the landing of an army on the South Devon coast. Dr. Bucknill was the active spirit in this agitation, and in the end a resolution was unanimously passed in favour of memorialising the War Office asking for permission to raise a force to be known as the Exeter and South Devon Volunteers. The required powers having been obtained, Dr. John Charles Bucknill was enrolled as the first recruit in the first regiment of Volunteers established on the new system in the United Kingdom. The new corps was officially named the 1st Exeter and Devonshire Rifle Volunteers. From this time forward he was an enthusiastic volunteer and took a very prominent part in the duties, both official and social, of the corps, gaining thereby wide popularity in the county, and earning the respect and friendship of his comrades.

In 1859 he became a Fellow of the Royal College of Physicians of London, and held in that body the posts of Censor from 1879 to 1881 and of Lumleian Lecturer in 1877. In the latter year he also delivered the presidential address in the Physiological Section at the annual meeting of the British Medical Association in Manchester. Being appointed in 1862 by the Lord Chancellor to be Medical Visitor of Lunatics, Dr. Bucknill resigned his appointment at the Devon County Asylum and also the editorship of the *Journal of Mental Science*. He held his new position for fourteen years and during his tenure of the office did a great deal towards abolishing several then surviving anomalies in the management and inspection of lunatic asylums. He likewise succeeded in getting his sphere of jurisdiction into a thoroughly workable state, to the great advantage of his successors. As a public servant he showed himself a thorough man of business with a rare grasp of detail; it is, in fact, as an indefatigable and fearless official that he will long be remembered with feelings of gratitude. In 1876 he retired from this position and devoted himself to private practice, retaining, however, the deepest interest in the affairs of asylum management and the relations between crime and mental disease. Two years later—namely, in 1878—he was instrumental in founding the journal *Brain* and became its editor, which position he occupied for many years. His work in the columns of this magazine was one of the most successful of its features and showed no mean literary power apart from the sound knowledge which was only to be expected from so profound a psychologist.

The literary works of Sir John Bucknill are not voluminous, but all that he wrote was worthy of his high reputation as a physician and scholar. His love of, and close acquaintance with, the works of Shakespeare was throughout his distinguished career a notable factor in his personal life, and his two books, "The Psychology of Shakspeare," published in 1859, and the dissertation printed in the following year on "Shakspeare and the Medical Knowledge of his Time," were valuable contributions to the literature of English poetry—the former disquisition, in particular, demonstrating in an exceptional degree the sympathetic insight which characterised all his literary work. His style as exhibited in this essay was marked by a rare ease of language and a thoroughness of erudition. His greatest work, "A Manual of Psychological Medicine," written in collaboration with his friend, Dr. Daniel Hack Tuke, contains, perhaps, the largest amount of useful information concerning insanity and allied neuroses of any work of similar scope in the language, the portions relating to criminal responsibility or irresponsibility being justly regarded, by jurists as well as medical witnesses, as authoritative. The arrangement of this work was somewhat new in the days when it appeared, it being based mainly on a statistical and tabular plan. "Care of the Insane and the Legal Control of the Mentally Deficient" appeared in 1880, and has been of the greatest value in the clear definition of the state of English law as regards the custody and restraint of the unsound in mind. "Habitual drunkenness" in its relation to crime was during this period (1878–1880) exercising the minds of the heads of the medical and legal professions to a great degree. The famous "Alcohol Controversy" had been carried on for some time in the pages of various reviews and journals. Among those who took a prominent part were Sir James Paget and the late Sir Benjamin Ward Richardson, but the medico-legal side of the question was almost entirely in the hands of Dr. Bucknill and Dr. Daniel Hack Tuke. The former contributed a very valuable essay on the Psychology of the Habitual Drunkard, which appeared in 1878 and caused at the time a considerable amount of controversy. Besides these, his more permanent works, Sir John Bucknill was the author of a large number of papers in the medical journals and was a frequent correspondent to the numerous learned societies of which he was a member. His last work, published in 1884, was "The Relation of Madness to Crime," a work of much practical value as well as interest, and may be fairly taken

as an example of the fruits of his long practical experience. Although a specialist he was in no way narrow. His own words, addressed to the Physiological Section of the British Medical Association at Manchester in 1877, although not intended to refer in any way to his own career, exemplify in a particularly apt manner his position. "This occasion seems opportune for speaking on a subject of great and general importance to us as specialists—viz, whether the customary practice of our speciality does not frequently tend to impair our usefulness by impairing our field of observation and narrowing our views of men and of society. ..... There can be no doubt that all special employment tends to narrowness of mind and that the learned professions suffer from this most notably. This was, indeed, long ago pointed out by Archbishop Whately in his work on 'Rhetoric,' and there can be no doubt there is a legist's narrowness, a priest's narrowness, and a physician's narrowness." He went on to insist on "the great need of the mental physician to breathe much of the pure air of rational life for the sake of both himself and his patients." "If there be one man more than another," he finally added, "who ought to be a man of the world it is the physician who has the care of the insane, for if he allows himself to become ignorant of the outside world he will make no comparison of the sane with the insane, and therefore will be liable to consider opinions and conduct morbid which are only strange." Sir John Bucknill carried out the precept here laid down. His social virtues will long be remembered by all who had the privilege of his acquaintance. He was throughout his career a man of the widest interests, and in the very liberality of his mental gifts did much more for his profession, and, above all, for the insane, than can well be estimated while his loss is fresh upon us.

Sir John Bucknill received the honour of knighthood in 1894 in recognition, not only of his wide learning and services to science, but in no small measure as an acknowledgment of his work in relation to the Auxiliary Forces. He was a justice of the peace for the county of Warwick and a Fellow of the Royal Society and a large number of other learned bodies both in England and on the Continent.

The funeral took place on Thursday at Clifton-on-Dunsmore, near Rugby.

JABEZ SPENCE RAMSKILL, M.D., M.R.C.P. LOND., M.R.C.S. ENG.

A NOTABLE figure in connexion with the early days of the National Hospital for the Paralysed and Epileptic has passed away in the person of Dr. J. S. Ramskill, who died on June 22nd at the age of seventy-three years. He received his medical education at Guy's Hospital, graduating as M.B. at the University of London in 1847 and proceeding to the degree of M.D. in 1849, and his first hospital appointment was that of physician to the Metropolitan Free Hospital. In 1859 he was elected assistant physician to the London Hospital and lecturer on medicine to the same institution, where his lectures on nervous diseases were much appreciated by the students and hospital resident medical officers. In 1859, too, he and Dr. Brown-Séquard were appointed the first two physicians to the National Hospital for the Paralysed and Epileptic in Queen's-square, a hospital at which he finally attained the position of senior physician, a post he held for many years. He was alway greatly interested in nervous diseases, and contributed the articles on Vertigo, Chronic Hydrocephalus, and Meningitis to "Reynolds's System of Medicine," as well as Lectures on Epilepsy to the *Medical Times and Gazette*. Dr. Ramskill was specially interested in the therapeutics of epilepsy, and it is to be regretted that he did not publish the results of a long inquiry he made as to the treatment of cases of epilepsy. He was a very genial and kind-hearted man, and will be greatly missed both by his numerous medical colleagues and his many friends outside the profession. He leaves a widow (his second wife) and one son.

MAX JOSEPH OERTEL.

BY the death, on July 13th, of Professor Max Joseph Oertel, medical science has lost one of its most eminent exponents. Born at Dillingen, Bavaria, in 1835, he studied philology and history at Munich before turning his attention to science and medicine. In 1860 he was appointed assistant to Professor Pfeuffer and a few years later pursued the study of laryngology under Professor Czermak, being himself appointed to the newly founded chair of Laryngology at Munich University in 1867. One of his earliest essays (1862) was upon the Endolaryngeal Removal of Laryngeal Polypus, which he was the first after Bruns to perform. The subject with which his name is mostly connected is that of the treatment of circulatory disorders, his contribution upon this being notable for the originality and breadth of view that it evinced. His essay appeared in 1882 in the "Handbook of Therapeutics," edited by Professor von Ziemssen, and his advocacy of graduated exercise and hill-climbing as a rational means of treatment of cardiac failure became known as the "Oertel cure." To the same work he contributed a lengthy article upon the Therapeutics of Respiratory Diseases. He had previously written upon Diphtheria in von Ziemssen's "Cyclopædia of Medicine," and his monograph, "Die Pathogenese der Epidemischen Diphtherie" (1887), completed a study commenced more than twenty years previously, when diphtheria was epidemic in Munich. That monograph, of which a full abstract was given in our columns at the time of its publication, was in the main a most profound analysis of the minuter histological lesions induced by diphtheria in the organs of the body, the text being accompanied by an atlas of beautifully executed microscopical drawings. Professor Oertel had, indeed, claimed the discovery of the bacillus diphtheriæ, but there is some doubt whether the organism he described is to be considered identical with that associated with the names of Klebs and Loeffler. At any rate, his demonstration of the cell lesions harmonised fully with the bacillary doctrine of the nature of diphtheria.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The following deaths have been announced:—Professor Johann R. von Lerch, at Hainfeld, on the 7th inst., aged eighty-three years. He had been dean of the medical faculty in the University of Vienna and also of the Doctoren-Collegium. Since 1888 he had lived in complete retirement.—Professor Oscar Boer, of Berlin, aged fifty years. He was a favourite pupil of Koch, and carried on many researches with him and with Behring, Ehrlich, Brieger, and Wassermann, mainly on the subject of immunity from infectious disease and the preparation and employment of antitoxic serums.

Medical News.

UNIVERSITY OF GLASGOW.—The following have passed the Final Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Kilgour Adamson, John Allan, James Andrew, James Mitchell Bonar, John Ritchie Brown, John Ritchie Burns, Charles Cairnie, M.A. James Souter Christie, Walter Colquhoun, M.A.; John Crawford, James Donaldson, William Duncan, Charles Elphinstone Fleming, George Willmore Francis, James Graham, James Hogg, James Donald Holmes, Robert Kirk, George Louis Le Fevre, Archibald Livingston, William Martin, M.A., B.Sc.; Samuel Martyn, George Bain Murdoch, Andrew Brown Murray, Neil McCullum, John Allan Craigie Macewen, B.Sc.; John M'Laws, Murdo Norman Macleod, Norman Macnair, B.Sc.; Robert Nelson, William Park, Henry Joseph Rankin, James Rankin, B.Sc.; James Rutherfurd Ratcliffe, Neil Robson, William Kerr Russell, David Shedden Service, Harry Muir Watson, James Wells, and Robert Wilson. *Women.*—Agnes Jane Anderson, Annie Kirbby Anderson, Ursula Chaplin, Mary Philip Graham, Norah Kemp, and Merbai Ardesir Vakil, B.A.

For the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.):—

Alexander Smith Allan, James Alston, William Cochran Burns, David Louis Cairns, Francis James Charteris, Joseph Adam Clarke, George Coats, George William Coats, James Duncan Cochran, Joseph Muir Corbett, Walter Scobie Findlay, M.A.; James Finlayson Fleming, Adrian Andrew Forrester, Thomas Bonnar Garvie, Lawrence Whitaker Harrison, Thomas Hunter, M.A., B.Sc.; Alexander Lawrie, William Mitchell Lindsay, William Glen Liston, John Watson Little, John MacDonald, James M'Haffie, David M'Kail, James M'Queen, M.A.; James Service Ormond, John Reid (Glasgow), Norman Emil Henry Scott, Robert Scott, Alexander Bankier Sloan, Samuel Macfarlane Sloan, David Steele Smith, John M'Callum Stewart, James Strang, Daniel Rees Thomas, Walter Lewis Thomson, William James Alexander Walker, William Watson, Ernest Watt, Edward Roberts Weir, John Wotherspoon, and David John Young. *Women.*—Jessie Hawkesworth Smith.

FOREIGN UNIVERSITY INTELLIGENCE.—*Kiel:* The title of Professor has been conferred upon Dr. L. Glaevecke, *privat docent* of Gynæcology, and upon Dr. E. Paulsen, *privat docent* of Laryngology.—*Manilla (Medical School):* Dr. Trinidad Pardo de Tavera has been appointed Professor of Anatomy; Dr. Ramon Fina y Baulenas, Professor of Surgical Pathology; Dr. Wenceslao Martinez, Professor of Forensic Medicine and Toxicology, and Dr. Mariano Garcia de Rey, Professor of Therapeutics.—*Naples:* The following have been recognised as *privat-docenten*: Dr. S. del Vecchio (Operative Medicine), Dr. Giovanni Miranda (Midwifery and Gynæcology), Dr. Carlo Gioffredi (Materia Medica and Pharmacology), and Dr. Giuseppe Ajello (Medical Chemistry).—*Vienna:* Dr. Richard Kretz has been recognised as *privat-docent* of Pathological Anatomy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—PRIZE LIST.—*Winter Session, 1896–97.* Descriptive Anatomy—Junior: J. F. Peart, first prize (£3) and medal; W. R. Meredith, second prize (£1) and certificate. Senior: J. S. P. Stewart and Miss F. A. Dreaper (equal), first prize (£3) and medal; J. S. P. Stewart and Miss F. A. Dreaper (equal), second prize (£1) and certificate. Practical Anatomy—First year: A. S. Ellenbogen, first prize (£3) and medal; J. F. Peart, second prize (£1) and certificate. Second year: J. S. P. Stewart, first prize (£3) and medal; Miss F. A. Dreaper, second prize (£1) and certificate. Third year: G. W. Little, first prize (£3) and medal; J. M. M. Crawford, second prize (£1) and certificate. Practice of Medicine.—D. A. Fitzgerald, first prize (£3) and medal; S. R. Godkin, second prize (£1) and certificate. Surgery.—A. S. Green, first prize (£3) and medal; F. J. Palmer, second prize (£1) and certificate. Midwifery.—F. J. Palmer, first prize (£3) and medal; D. Hadden, second prize (£1) and certificate. Physiology.—J. S. P. Stewart, first prize (£3) and medal; Mrs H. L. Hennessy, second prize (£1) and certificate. Chemistry.—J. P. Byrne, first prize (£3) and medal; J. P. O'Donnell, second prize (£1) and certificate. Pathology.—W. H. May, first prize (£3) and medal; P. H. Falkner, second prize (£1) and certificate. Physics.—E. Glenny, first prize (£3) and medal; S. Gordon, second prize (£1) and certificate. *Summer Session, 1897.*—Carmichael Scholarship: D. A. Fitzgerald, £15. Mayne Scholarship: F. J. Palmer, £15. Gold and Silver Medals in Surgery.—A. S. Green, gold medal; D. Hadden, silver medal. Practical Histology: H. Graff and Mrs. H. L. Hennessy (equal), first prize (£3) and medal. Practical Chemistry: G. Lewis, first prize (£3) and medal; R. H. G. Oulton, second prize (£1) and certificate. Public Health and Forensic Medicine: J. F. Meyler, first prize (£3) and medal; S. R. Godkin, second prize (£1) and certificate. Materia Medica: C. C. Meeke, first prize (£3) and medal; D. Jones, second prize (£1) and certificate. Practical Pharmacy: E. Glenny, first prize (£3) and medal; M. J. Johnston, second prize (£1) and certificate. Biology: J. Byrne, first prize (£3) and medal; E. Glenny, second prize (£1) and certificate. The preliminary examinations for the conjoint diplomas of the Royal College of Physicians and the Royal College of Surgeons will be held on Tuesday and Wednesday, Sept. 28th and 29th. The prospectus of the course of study can be had on written application to the Registrar, Royal College of Surgeons in Ireland, Dublin.

LONDON HOSPITAL MEDICAL COLLEGE.—The following is a list of the scholarships and prizes awarded (session 1896–97).—Prize Scholarship in Science (£120): H. E. Ridewood. Prize Scholarship in Anatomy and Physiology (£60): E. W. A. Walker. Entrance Science Scholarships: A. B. Lindesey (£60) and C. E. Ham (£35). Buxton Scholarships in Arts: T. S. Dudding (£30) and T. J. Latham (£20). Epsom Scholarship, for students of Epsom College: E. F. Fisher. Clinical Medicine: £20 scholarship, F. F. Ward; honorary certificates, C. B. Wall and A. G. Wilson. Clinical Surgery: £20 scholarship, W. E. Heilborn; honorary certificates, T. S. Novis and E. E. Prest. Clinical Obstetrics: £20 scholarship, R. W. Pearson; honorary certificates, H. L. Gregory and G. Hutcheson. Duckworth Nelson Prize: biennial (£10), T. S. Novis; honorary certificate, A. G. Wilson. Letheby Prizes: Senior (£20), H. D. Pollard; honorary certificates, O. Eichholz, H. Balean, and M. F. Reaney; Junior (£10), R. V. Dolbey; honorary certificates, C. E. Ham, T. L. Lewis, and T. S. Dudding. Sutton Scholarship (£20): E. Frazer. Anatomy and Physiology: £25 scholarship, A. F. Tregold; honorary certificates, W. R. Dunstan, J. Sherren, H. D. Pollard, H. Balean, and E. Merry. Anatomy and Biology: £20 scholarship, H. E. Ridewood; honorary certificate, C. E. Ham. Dressers' Prizes: £15 Prizes, M. F. Reaney and A. N. Symons; £10 prize, W. B. Taylor; £7 10*s.* prizes, B. C. Broomhall and R. H. N. Smith; £5 prize, H. Hodgson; honorary certificates, J. H. Sanders and E. M. Ridge. Practical Anatomy: £6 prize, A. B. Soltau; £4 prize, A. L. Matthews; honorary certificates, A. S. David, C. L. Traylen, D. Ellis, A. N. Symons, and R. Gauld.

THE SANITARY INSTITUTE.—The twenty-first anniversary of the Sanitary Institute occurred this month, and the Council arranged a commemorative dinner on the 7th, to celebrate the success that has attended the efforts of the institute to promote the public health and advance sanitary science. The Duke of Cambridge, president of the institute, was in the chair, and the company present numbered about 130, including the Earl of Stamford, Lord Kelvin, Sir Henry C. Burdett, Sir William R. Gowers, Sir Guyer Hunter, &c. Professor W. H. Corfield and Sir Douglas Galton responded to the toast of the Institute, the latter of whom said, in the course of his speech, that the Public Health Act of 1875 gave a new development to sanitation all over the country, and the institute was founded in 1876 for the purpose of advancing knowledge in all subjects bearing on public health. The earliest congress, in 1877, began with 150 members and an income of £150, but in 1897 there are 2100 members and the income is £6000. The Parkes Museum was founded in the same year as the Sanitary Institute, and the efficient action of the two institutions was largely increased by the union of them, which took place a few years later.

THE BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual general meeting of this association took place on July 15th, at the Café Royal, Regent-street, W. Dr. C. T. Brookhouse was elected President for the ensuing year, and Dr. A. W. Thomas Vice-President. Dr. Sunderland, the retiring President, congratulated the members present on their excellent organisation, and cordially thanked the officers of the association for their kind coöperation with him during his year of office. The members and their friends to the number of fifty-one afterwards dined together, and there were present, among others, Sir John Williams, Dr. A. E. Sansom, Dr. Clement Godson, and Mr. Howard Marsh. Dr. Sansom proposed the Health of the Association, which was responded to by the hon. secretary, Dr. Major Greenwood, who, in the course of his remarks, pointed out that the flourishing condition of their association was not a little due to the supineness of the English universities in neglecting to afford reasonable means for graduation in this country. Mr. Franklin Clive and Madame George sang some excellent songs during the evening, and Dr. Haydon also assisted with some admirable violin solos.

OPHTHALMIA AT THE ELY (CARDIFF) SCHOOLS.—At the meeting of the Cardiff Board of Guardians, held recently, Mr. H. C. Ensor reported that 38 per cent. of the children at Ely Schools were affected with ophthalmia, but all the cases were of the mildest form, with the exception of 9 which were acute.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of directors was held on July 14th, Dr. Pollock, Vice-President, being in the chair. Three new members were elected, and the death of one was reported. The death of a widow was announced. Fresh applications were made by the guardians of two orphans for extra assistance to complete their education and cure of spinal curvature. A sum of £1206 10*s.* was voted to be distributed among the fifty widows, eleven orphans, and six orphans on the Copeland Fund. The expenses of the quarter amounted to £45 3*s.*

PRESENTATIONS TO MEDICAL MEN.—Mr. Joseph J. Cullen, L.R.C.P., L.R.C.S. Irel., medical officer, Castleknock, was on the 7th inst., at the Town Hall, Dalkey, presented by his many friends with a gold watch and chain and an artistically illuminated address as tokens of esteem.—Mr. Walter Petter, M.B., C.M. Edin., and Mr. John Smale, L.R.C.P. Lond., M.R.C.S. Eng., both of Darlington, have been the recipients of a silver inkstand and a silver eggstand respectively for their honorary instructions in first-aid to the

local classes of the St. John Ambulance Association.—Mr. Albert G. Willington, M.D. St. And., M.R.C.S. Eng., of Handsworth, who is leaving that town after practising there for fifty years, has been presented by his friends with an illuminated address and a purse of sovereigns.

THE HEALTH OF LOWESTOFT.—The Borough of Lowestoft, with a population of over 26,000, had only four zymotic deaths during the second quarter of the present year—viz.: one from diarrhœa and three from whooping-cough. The corrected death-rate for the same period was 14·8.

MEDICAL MAGISTRATE.—Mr. Patrick R. Murison, M.B., C.M. Edin., L.R.C.P. Lond., of Dundee, has been placed on the Commission of the Peace for the county of the city of Dundee.

THE Committee of the City of London Hospital for Diseases of the Chest, Victoria Park, have appointed Mr. Henry T. Dudley Ryder secretary to the institution, in place of the late Captain Storrar-Smith.

MR. C. E. M. HEY, M.R.C.S. Eng., &c., who is a Knight of Grace of the Order of St. John of Jerusalem in England, has received the honour of the French decoration of the 1st class, which has been conferred upon him at the recommendation of La Société Nationale de Sauvetage de France.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

THE Government has made it known that the Public Health (Scotland) Bill is one of the measures which must be passed during the present session of Parliament.

Infant Life Protection Bill.

This measure has now passed through all its stages in the House of Lords, and in the House of Commons has been read a second time and considered by the Grand Committee on Law. It differs in many particulars from former Bills dealing with this subject, and especially in this, that it substitutes for the registration of houses a system of notification to the local authority. Its application is confined to houses where more than one infant of less than five years of age is kept for hire or reward, and it gives the local authority power of supervision and inspection. The local authority may cause to be removed to a proper place of safety a child who is found in a house so unfit or so overcrowded as to endanger health, or is in the keeping of a person who, by reason of negligence, ignorance, or other cause, is so unfit to have the care and maintenance of the child as to endanger health. When the Bill was before the Grand Committee on Law Sir William Priestley put forward the idea whether it should not be made to apply to houses where only one child is received. He did not, however, press it, and the Committee decided not to alter the provision.

London Water Question.

During the committee stage of the Metropolitan Water Companies Bill an attempt was made to get a clause inserted providing that in the case of a deficiency of water during any quarter the occupier might complain to the Railway and Canal Commission, and if the complaint was well founded the Commission might order the water company to repay the proportionate part of the rate for the days during which the supply was deficient. The clause received a considerable measure of support in different parts of the House, but the Government opposed it mainly on the ground that it went beyond the scope and intention of the Bill and on a division it was rejected by 134 to 75 votes.

London University.

At the close of the sitting of the House of Lords on Tuesday, July 20th, the Duke of Devonshire, Lord President of the Council, formally presented a Bill to make further provision with respect to the University of London.

HOUSE OF LORDS.

THURSDAY, JULY 15TH.

Lunacy Bill.

The Committee stage of the Lunacy Bill was taken at this sitting of their lordships' House. Considerable discussion arose with regard to Clause 15, which gives power to the Lunacy Commissioners to require amendment of the regulations of hospitals.—Earl Russell moved to omit the whole clause, saying that it was not necessary to give this power in the case of county or other asylums managed by large public authorities, the members of which were elective and were subject to public criticism. The Lord Chancellor took the position that instead of moving now the omission of the entire clause his lordship should have proposed some amendment by way of limiting the proposed power.—The Earl of Northbrook made the suggestion that in the case of an asylum maintained out of county or borough rates the council of the county or borough should have the opportunity of making representations against the proposed rules before they were finally approved by the Secretary of State.—The Lord Chancellor thought this reasonable and undertook to consider it.—In connexion with Clause 19 Earl Russell said that if it were enforced too rigidly at first it would press hardly upon London in the present congested state of lunacy accommodation. The London County Council, he pointed out, had 2000 lunatics under charge for whom they had no accommodation in asylums. He frankly admitted that their asylums were somewhat overcrowded, not to an extent prejudicial to health, but in a way that would be affected by this clause. The clause was reasonable in itself, but he trusted that in putting it into force some allowance would be made for the condition of things that had necessarily arisen in London.—A long debate took place with regard to the proposal in the Bill to extend to the officers and employés of lunatic asylums the provisions of the Poor-law Officers Superannuation Act of 1896, and as the outcome of it all the superannuation clauses in the Bill were withdrawn.

HOUSE OF COMMONS.

THURSDAY, JULY 15TH.

Diphtheria at Devonport.

Captain Norton asked the Under-Secretary of State for War whether, in reference to the recent outbreak of diphtheria at Devonport, by which two lives were lost, any sanitary recommendations had been made, and, if so, how far back, by the Army Medical Department or Royal Engineers respecting defects in the drainage of the Raglan Barracks; and, if recommendations were made, what were the circumstances that prevented the War Office from carrying them out.—Mr. Broderick replied that in April, 1896, the medical officer at Devonport reported that the drains of the Raglan Barracks were in an unsatisfactory state. Inquiry was made with the result that the general officer commanding submitted a comprehensive scheme involving a large cost. This had to be examined before the work could be undertaken. Money was taken in this year's estimates, and every effort would be made to press on the work as quickly as possible.

FRIDAY, JULY 16TH.

Bill for the Regulation of Dogs.

Mr. Walter Long, President of the Board of Agriculture, intimated, in reply to a question, that he hoped to be able very shortly to lay on the table a Bill for the better regulation of dogs on the lines recommended by the Departmental Committee, by which the question was recently considered. He had no intention of pressing the Bill through the House during the present session, though he would be very glad to find that the measure was generally acceptable. What he had in view was that the provisions of the Bill should be thoroughly understood by the House and the various public authorities throughout the country.

Cycle Accidents.

Sir Elliott Lees asked the Home Secretary whether, in view of the numerous police prosecutions against cyclists and the want of any definite standard as to what might be considered by the courts a lawful and safe pace for a cycle on the public highway, the Home Office would lay down and announce some regulations defining the maximum speed which they considered compatible with the public safety in town, country, and suburban districts respectively.—Sir M. White Ridley replied: I have no power to make any such regulations, and it seems clear, too, that the question what is furious or dangerous riding must depend upon the circumstances of each particular case. I may add that I made inquiry last year of the chief officers of all the police forces in England and Wales as to the number of accidents caused by cyclists in their respective districts and the remedies they suggested if the protection given by the present law seemed to them insufficient; but their replies were such as to lead me to the conclusion that no alteration in the law was required.

Experiments on Living Animals.

Mr. Weir asked the Home Secretary: (1) Having regard to the allegations made by Mr. E. Berdoe relative to the use of curare in the practice of vivisection, and to the statement of the Home Office that the experiments referred to were performed under anæsthetics, and that curare, though used, was used when the animals could not suffer pain, would he state what anæsthetics were so used; (2) was he aware that it had been held on the highest authority (Professor Claude Bernard) that an animal stupefied with morphia was still conscious to suffering, and that an animal under the influence of curare became absolutely paralysed, but was still sensible to pain though unable to show it by sound or struggle; and (3) would he state whether, in the experiments to which he referred, dogs were the animals experimented upon?—Sir M. White Ridley replied: I informed the hon. Member on Tuesday that chloroform was the anæsthetic used. My answer to the second paragraph is in the negative, and to the third paragraph in the affirmative.—Mr. Weir asked the Home Secretary if he would state the number of experiments in which curare was used in the practise of vivisection during last year and the number of licencees by whom that drug was used; and would he state the names of the licensed places where curare was used in the practice of vivisection during the year.—Sir M. White Ridley replied: I cannot see that the returns for which the hon. Member asks would serve any good purpose, and I do not propose, therefore, to call for them. Curare is prohibited by law from being used as an anæsthetic, and I am perfectly satisfied that it is not so used.

MONDAY, JULY 19TH.

Classification in Lunatic Asylums.

Mr. Weir asked the Home Secretary if he would state under what circumstances a person in a county asylum who was classified as a pauper under Section 3 of the Lunacy Act, 1891, was entitled to be classified as a private patient.—Sir M. White Ridley replied that as soon as the

asylum authorities had reasonable grounds for believing either that the patient was entitled to property which would be available for his maintenance and sufficient to render him no longer even partly chargeable to a union, county, or borough, or that an undertaking had been given by a friend or relative to provide a sum sufficient for the purpose, he would no longer be classed as a pauper.

Beri-beri in Ireland.

Mr. Patrick Aloysius M'Hugh asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the Eastern disease, beri-beri, was at present prevalent in Richmond Lunatic Asylum, Dublin; how long had this institution been afflicted with this disease, and how many nurses had suffered from it; whether medical experts, including medical gentlemen of the highest eminence connected with the institution, attributed the existence of the disease to overcrowding; was he aware that the Board of Control of lunatic asylums was responsible for the overcrowding; and would he take steps to secure that the Board of Control would not be permitted to stand in the way of necessary reforms in connexion with this asylum?—Mr. Gerald Balfour replied: Thirty-six patients and three nurses in the Richmond Asylum are at present suffering from the disease known as beri-beri. The disease first appeared in the institution about May, 1894, and continued until October, after which no fresh cases occurred. There was no outbreak in 1895, but it re-appeared in August, 1896, since when the institution has not been entirely free from it, although it almost died out in the colder months. Ten nurses in all have suffered from it—viz., seven in 1896 and three during the present year. Medical experts are of opinion that the disease was fostered by overcrowding. It is the duty of the Board of Control to provide such accommodation as is necessary in the district asylums in Ireland. In consequence of the rapid increase of lunacy in the Richmond district it was decided in 1892 to build an additional asylum for 1200 patients at Portrane, and that work is now in progress. In 1893 and 1894 temporary buildings were erected at Richmond Asylum for 298 patients, and since then accommodation has been provided for 224 patients, and further buildings are now being erected, which, it is anticipated, will make the total accommodation sufficient for the number at present in the asylum. The Board of Control are anxious to aid and promote by every means in their power any reforms necessary for the improvement of the Richmond Asylum, and works are being carried out with the view of effecting that object.

TUESDAY, JULY 20TH.

Army Medical Officers.

Colonel Denny asked the Under Secretary of State for War when the Secretary of State for War would be in a position to carry out the intention expressed by the Under Secretary when the Army Estimates were introduced last February of affording assistance to form medical messes at the large stations.—Mr. Brodrick replied that messes for medical officers had been established at the principal stations. The Secretary of State said that he would be prepared to consider any case in which it might be represented that a mess was still required.

Experiments on Living Animals.

Mr. Weir asked the Home Secretary, seeing that an animal subjected to a true anæsthetic such as chloroform was insensible to pain, would he state whether there was any reason why the use of curare in the practice of vivisection should not be forbidden, especially in view of the fact that an animal under the influence of curare had been held by the highest authority, Professor Claude Bernard, to be acutely sensible to pain, notwithstanding the fact that it was so paralysed by the drug as to be unable to express its pain by sound or struggle.—Sir M. White Ridley: As I have already stated, I am satisfied that curare is not used as an anæsthetic. There are cases, however, in which its use along with the anæsthetic is indispensable for the success of the investigation, but its use does not make the anæsthetised animal sensible to pain.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AMENABAR, JULIUS DANIEL, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Eye Infirmary, Wolverhampton.

ASHTON, GEORGE, M.B., Ch.B. Vict., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the Chorlton Union Hospitals, Withington, Manchester.

BENSON, T. S., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Annfield Plain Urban District Council.

BIRD, JAS. B., M.B., C.M. Edin., has been appointed Assistant Physician to the Cumberland Infirmary, vice R. D. Helm.

BROUGH, DANIEL, M.B., C.M. Edin., has been appointed House Surgeon to the Bridgwater Infirmary, Bridgwater.

COWIE, WM., M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Plumstead Infirmary, Kent.

DAVIDSON, PERCIVAL, M.B., B.S. Durh., has been appointed Senior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

FLEMING, R. A., M.D., F.R.C.P. Edin., has been appointed one of the Pathologists to the Edinburgh Royal Infirmary, vice R. F. C. Leith.

GOLDSMITH, F., M.B., Ch.B. Adel., has been appointed Medical Officer at Port Darwin, South Australia, vice L. S. O'Flaherty.

GOSSE, WILLIAM, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Camb., has been appointed a Public Vaccinator for the Sittingbourne District of the Milton Union.

HOPE, E. W., M.D. Edin., D.Sc. (Public Health), B.Sc., L.R.C.P. Lond., has been appointed to a Professorship of Public Health, University College, Liverpool.

KINGDON, WILFRED R., M.B., B.S. Durh., has been appointed Resident Medical Officer of the Woodlands Asylum, Ticehurst, Sussex.

LEE, W. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed House Physician at the Royal Hospital, Sheffield.

LEITH, R. F. C., M.B., C.M. Edin., F.R.C.P., has been appointed an Assistant Physician to the Edinburgh Royal Infirmary.

LLOYD, JORDAN, M.B., F.R.C.S., has been appointed Honorary Consulting Surgeon to the West Bromwich District Hospital, vice O. Pemberton, deceased.

MARTIN, A. J., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed an Honorary Acting Physician to the Walsall and District Hospital.

MASON, T. P., M.B. Lond., F.R.C.S. Irel., has been appointed a Consulting Physician to Mercer's Hospital, Dublin.

PARTINGTON, WM., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Tunstall Urban District Council.

PATTINSON, J., has been appointed Public Analyst for the Borough of Sunderland by the Sunderland Town Council.

SIMPSON, W. P., M.B., C.M. Edin., has been appointed Medical Officer for the Pelham Lounds Sanitary District of the Boston Union.

STOKER, H., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for Melbourne, Victoria, Australia.

RENNEY, HENRY, M.D. Durh., D.P.H., has been appointed Honorary Deputy Medical Officer of Health by the Sunderland Town Council.

ROWELL, WILLIAM HENRY, M.B., B.S. Durh., has been appointed Junior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

VERNON, WM., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Bitton Sanitary District of the Warmley (out-relief) Union, vice G. G. D. Willett.

WHITMARSH, R. P. H., M.D. Brux., L.R.C.P., L.R.C.S.E., L.S.A. Lond., has been appointed Resident House Physician to the Hospital for Consumption, Brompton.

WILLIAMS, JOHN HUMPHRY, M.D., C.M. Edin., has been re-appointed Medical Officer of Health for the Borough of Flint.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITALS, Manchester.—Resident Senior House Surgeon. Salary £80, with board and washing.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer. Salary £80 a year, with board, lodging, and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant (non-resident) for three months. Honorarium of thirteen guineas will be given.

BOSCOMBE HOSPITAL, Shelley-road, Boscombe, Bournemouth.—House Surgeon, unmarried. Salary £60 (exclusive of wine and beer), lodging, and washing.

BRADFORD UNION WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100 per annum, with prescribed rations, washing, and apartments in the Workhouse. Applications to the Clerk to the Guardians.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, N.W.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

QUEEN'S COLLEGES, Ireland.—Professorship of Medicine in the Queen's College, Cork. Applications to the Under Secretary, Dublin Castle.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL SURREY COUNTY HOSPITAL, Guildford — Assistant House Surgeon. Board, residence, and laundry provided.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 a year, with board, washing, and residence. Also Junior Assistant House Surgeon for six months. Honorarium at the rate of £24 per annum, with residence, board, and washing.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 annually to £130, with furnished rooms, coal, and gas, and an allowance of £25 for travelling expenses.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland. — Resident Clinical Clerk for six months. Board and lodging provided, with a nominal salary.

Births, Marriages, and Deaths.

BIRTHS.

ASHWELL.—On July 18th, at Mansfield-road, Nottingham, the wife of H. G. Ashwell, M.R.C.S., L.R.C.P., of a son.

GLOSTER.—On July 15th, at Upper Phillimore-place, Kensington, the wife of J. C. Gloster, M.B., M.Ch., of a daughter.

HEATH.—On July 14th, at Hagley-road, Edgbaston, Birmingham, the wife of A. Douglas Heath, M.D., of a daughter.

HOUGHTON.—On July 18th, at East Looe, Cornwall, the wife of Leonard F. Houghton, M.R.C.S., L.R.C.P., of a son.

MILLER.—On July 18th, at 747, Commercial-road, Limehouse, E., the wife of Arthur W. Miller, M.B., C.M., of a daughter.

NEALE.—On July 19th, at Truro Villa, Nevil-road, Bishopston, Bristol, the wife of Albert E. Neale, M.B., B.S., of a son.

OLIVER.—On July 19th, at Westdene, Maidstone, the wife of Charles Pye Oliver, M.D., of a son.

SMITH.—On July 14th, at Warkworth House, S. Thomas, Exeter, the wife of Thomas Smith, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BLACKER—MARRIOTT.—On July 7th, in the Cathedral at Exeter, by the Rev. Canon Edmonds assisted by the Rev. William David, Arthur Barry Blacker, M.D., B.S., of 15, West Eaton place, S.W., son of the late Rev. Maxwell J. Blacker, M.A., and grandson of the late Lieut.-Colonel Valentine Blacker, C.B., Surveyor-General of India, to Zaré Elizabeth Marriott, widow of George Herbert Marriott, of Orotava, Teneriffe.

COWAN—GRANT.—On July 14th, at St. George's, Dunster, John James Cowan, M.B., C.M., second son of Inspector-General M. W. Cowan, M.D., R.N., of Leigh Lodge, Worcester, to Gertrude (Bai), only daughter of Vice-Admiral John F. G. Grant, of Alcombe, Somerset.

JEFFREYS OWEN—JONES.—On July 7th, at St. Mary's, Bath, R. Jeffreys Owen, L.R.C.P. Lond., M.R.C.S., of Llandovery, to Mary Elizabeth, only daughter of the late George Jones, Esq., J.P., of Ystrad, Llandovery.

LEMON—WHITE.—On July 17th, at St. Paul's, Edinburgh, Edward Henry Lemon, M.R.C.S., L.R.C.P., D.P.H., of Lee, Kent, to Adelaide Theresa, only daughter of the late Robert White, Abercromby-place, Edinburgh.

REID—BRUCE.—On July 15th, at Strathpeffer Church, by the Rev. Jas. Fraser, M.A., minister of Blair-Atholl, assisted by Rev. John M'Gilchrist, B.D., minister of Fodderty, Wm. Reid, Physician-Superintendent of the Aberdeen Royal Lunatic Asylum, to Grace Garden, eldest daughter of Wm. Bruce, M.A., M.D., LL.D., The Castle, Dingwall.

DEATHS.

BUCKNILL.—On July 19th, at Bournemouth, Sir John Charles Bucknill, M.D., F.R.S., aged 79.

ROBERTSON.—On July 15th, at Buxton, William Henry Robertson, M.D., aged 86.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 22nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Rainfall.	Remarks at 8.30 A.M.
July 16	30·06	N.E.	66	59	118	81	60	...	Fine
,, 17	30·08	W.	70	64	112	82	63	...	Hazy
,, 18	30·12	S.E.	68	59	117	82	59	...	Hazy
,, 19	29·78	S.E.	68	59	114	79	63	0·48	Hazy
,, 20	29·57	S.W.	65	62	125	79	61	...	Cloudy
,, 21	29·65	S.W.	63	60	115	75	59	...	Overcast
,, 22	29·89	N.W.	63	60	111	72	61	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE PROFESSORSHIP OF MATERIA MEDICA AT GLASGOW.

WE have received the testimonials in favour of "Robert Bell, M.B., M.D.," for the chair vacant by the death of Professor Charteris, and we advise Dr. Bell in his own interests to edit his testimonials before approaching Lord Balfour of Burleigh on the strength of them. "M.B., M.D.," is not a usual affix to a physician's name, while the writer of the private letter and the testimonial on page 18 (both of which are published) was never a baronet and is now dead. Testimonials, when containing no errors, are looked at sufficiently askance nowadays, so much have they been abused; but testimonials to which an incorrect statement is appended will prove of negative value.

A WARNING.

To the Editors of THE LANCET.

SIRS,—Will you permit me space in the interests of the profession to utter a warning note to any professional brethren who may be contemplating appointments abroad? First, let them be sure that what appears a large salary to them at home is of the same relative value in the country whither they propose to go. Secondly, have everything reduced to writing in such form as to be cognisable by the courts of both countries. Thirdly, if it be the United States have an agreement signed in England before starting and embodying a clause to the effect that a new agreement embracing the same terms shall be executed in America on landing. Fourthly, insist that the facts upon which any promised advantages are based shall also be reduced to writing. Fifthly, do not take any "collateral advantages" as part remuneration. Get money value for your services and pay cash for your collateral advantages when you have found out what they are worth. Lastly, insist upon a clause securing your return passage in any case. These suggestions are the result of my own experience. Let me emphasise and illustrate them by two examples.

In 1893 I left England "with my household gods" as medical officer to the Lower California Development Company, operating in Lower California, Mexico. The salary was only £100 per annum, but as collateral inducements I was offered private practice in a country whose lovely climate, cheap living, natural advantages, future prospects as a new Riverside at fruit-farming were attracting numerous thriving investors. Moreover, there was an outlook for my boy in the acquirement on what would have been very advantageous terms (had the acquisition proved worth anything at all) of a fruit ranche. I was told of fenced and planted farms, of a large territory under irrigation by nine miles of pipe line, of frequent shipping communication by the company's steamers, of a railway in construction to connect the place with the United States, "the first seventeen miles now being open for traffic," and numberless other things tending to sink my £100 per annum into insignificance by the side of the collateral advantages. I found—an arid wilderness of leagues of sand and cactus, without foliage or available water, and occupied by some six or eight officials, with a few settlers—chiefly refugees from justice—and Mexican peasants—thriftless and quarrelsome, the whole numbering perhaps seventy, certainly not more. The frequent steamers ran once a fortnight, so that one could not go away without leaving for two weeks. The climate (on the coast) consisted chiefly of wind and sandstorm from sunrise to sunset, while the railway, "now open for traffic," had never run but one train—viz., two years before for Government inspection, which had resulted in rejection. The line began nowhere, passed by nowhere, and ended abruptly in a Sahara. There were three or four fenced ranches, not more, which had been abandoned mostly by their owners, and, save as a source of tax income to the Mexican Government, were of no value to anyone. Finally, one was imprisoned there—"anchored," as the secretary of the company euphemistically phrased it—almost as securely as though one had been a prisoner on a barren rock in mid ocean. If any corroboration be needed of my account of this place it can, doubtless, be furnished by my predecessor there, Mr. H. W. Newton, formerly, I believe, of the Middlesex Hospital.

Now for my second experience. I escaped from Lower California, after fifteen months' penal servitude, a sadder (but I regret to say not a wiser) man. After twelve months in Los Angelos trying, though with insufficient capital yet with good prospect of ultimate success, to work up a practice, I was informed that the Mountain Mines, Limited (now the Mountain Copper Company, Limited), an English syndicate operating in Northern California, wanted a resident physician. After some correspondence I went up there to investigate and be investigated. I found what undoubtedly bade fair to be the prosperous undertaking into which it has subsequently developed. The manager was essentially an English—or rather Scottish—gentleman, the staff congenial, and the surroundings and conditions apparently conducive to a life worth living, while for a man devoted to his profession there was every promise of good practice (especially surgical) as things developed. The following terms were agreed upon between the manager and myself (subject to confirmation in London), and were taken down by me in writing at his dictation. The salary I knew to be less than half that customary in this country, where the lowest professional fee is $2.50 or 10*s*. But then, there were splendid opportunities in the future for practice, which is always allowed in this country, and other "collateral advantages." 1. Salary, undetermined. I asked for a minimum of $150 a month. The manager thought the company would not give more than $100 or at most $125. (They had been paying a local practitioner in Redding, seven miles off, $100 a month for a bi-weekly visit and attendance on urgent summons, while he enjoyed an excellent practice at home). 2. Board free for myself and at $15 a month for each member of my family. 3. A house to be built for me rent free, furnished as to all essentials by the company, and with free fuel, light, and attendance. 4. Such private practice as could be undertaken without neglecting official duties and the right to charge fees for attendance on employés' families. In due course I was offered the appointment if I would accept a salary of $125, which I did. This, with free board at $15, made a nominal $140. As the manager was anxious to start on the erection of a hospital (which was not, however, begun for nearly twelve months) I started up by request four days later and, without waiting to sign any agreement, as soon as I had given up my house and office, sold my belongings, &c. I expected, of course, to have at least a one or two years' agreement on the terms stated presented to me for signature on arrival. When I spoke about this later, to my astonishment I was told "this company does not give agreements to its staff." However, as I found all the other officers in the same case, and no one apparently with any misgiving, I had no alternative but to be content. My house, it is true, made no progress for various reasons; but I was given furnished quarters rent free (a bedroom and a sitting-room), and all the other clauses were duly fulfilled. Some months later two directors came out. They calmly interdicted private practice, scoffed at the idea of charging fees to families, and insisted on their attendance being included in the duties of my salary, and charged me rent for my quarters (reduced to a bedroom only), making the same one month retrospective. When I appealed to the terms on which I came, and which the manager was willing to substantiate, they calmly informed me that as my salary was paid monthly, my tenure was only a monthly one. They did not intend to fulfil those terms; they could buy lots of doctors as the steamships did for £10 a month and if I did not like it I could quit at any time. Again I was trapped; I had given up all and had nothing to go to, so perforce had to stay. Since then the works have increased. Three smelters, an extensive mine, and eleven miles of mountain railroad employ upwards of 600 men, many with families. The work exacted from the doctor here is the most arduous I have ever seen or heard of, to say nothing of the responsibility involved. Yet his pay is only $140 a month out of which not only board but even rent for his quarters in hospital (a house surgeon charged rent!) is exacted. Compare this with the $100 a month and upwards paid to various classes of mechanics and $50 a month and upwards for common labour. Why, the work here would easily earn at the minimum fees authorised by the Medical Society and adopted by all reputable practitioners $1500 a month. On the calculation of a three months' basis it is actually pay for journeys, visits, consultations, operations, dressings, and confinements, of under 19 cents (9½*d*.) each! Further, the company has issued a ukase that no member of its staff is to do any business of any kind outside the company's duties; so that if one should see a profitable investment, which is not unlikely in a great mining country, one is debarred under pain of dismissal from availing oneself of it. Finally, a few months ago, the board suggested that the doctor should do private practice and pay the fees to the company, the directors reserving the right of deciding what portion of these fees, "if any," they should return to their doctor. Not having arrived at the stage at which I am prepared to be guilty of "infamous conduct in a professional respect" by complying with such an outrageous demand, needless to say I declined. Two days ago, on grounds not personal but of public policy professionally, I handed in my resignation, and I quote this with the other instance as a warning to all who may contemplate taking up company appointments abroad to trust nothing to either the truthfulness as to matter of fact or the scrupulousness as to matters of agreement of companies or their officials. Rather, have everything—promises, representations as to actually existent conditions, limitations of freedom, &c.—in black and white, duly signed, sealed, and delivered in such a way as to be cognisable by the courts of both countries, and above all, insist on a clause guaranteeing your return passage.

As a St. Mary's man, I am known to most of the authorities there, who will be able to testify whether my remarks are *primâ facie* worthy of credence or not. As to my service here, I am content to leave my record in the hands of the late manager, Mr. Alex. Hill, C.E., whose retirement only took place this month.

I am, Sirs, yours faithfully,
KENNETH W. MILLICAN, B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Edin.

Keswick, Cal., June 18th, 1897.

W.H.F. (South Molton).—We do not know the meaning of A.K.S. Possibly it is a mistake for A.K.C. If so the letters mean "Associate of King's College," which is not a medical qualification, but somewhat equivalent to the B.A. of an ordinary university.

PREVENTION OF VENEREAL DISEASES.

WE are obliged to our Sydney, N.S.W., correspondent for his suggestion. Without discussing the possible efficacy or not of his proposal we fear that its application would be attended with such difficulties and objections as to make it impracticable to carry out.

J. W.—(1) We cannot say. (2) We do not prescribe or suggest treatment. (3) The degree is a good one, though we cannot attempt to classify it as harder or easier of attainment than that of the other universities named. (4) Yes.

R. W.—Our correspondent is advised not to apply for the vacancy. The profession in the neighbourhood are right to resent such methods.

One in Doubt need be in doubt no longer. The operation is impossible.

F. D. B.—We think so.

LUPUS NECROGENICUS AND LUPUS VERRUCOSUS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers supply me with any information concerning the literature of lupus necrogenicus or lupus verrucosus?

I am, Sirs, yours faithfully,
Blaenavon, Mon., July 19th, 1897. J. THOMSON.

A MYSTERIOUS QUESTION.

To the Editors of THE LANCET.

SIRS,—Please insert the following in next week's LANCET:—"Is there any cure for scarlet fever dropsy beginning in ancles and going gradually up body. If so, what will cure it? Bornall please answer (to Besom)."

Yours truely,

F. R.

*** We give the insertion which is asked; perhaps our correspondent will now give us a literal "construe" of the communication.—ED. L.

Cue.—The circumstances of the case dictate the answer. If the bicycle is to be used entirely for the conduct of the principal's practice, or for its development, it seems to us to be his duty to purchase it and keep it in order. If the assistant's work has previously been got through without a bicycle, and there is no suggestion that he should do more with a bicycle, the principal may look upon the purchase of a machine as a luxury in which he does not personally participate, and may therefore be just in thinking that he ought to be at no expense in the matter. Probably both parties would benefit by the purchase of a bicycle; therefore some arrangement might be arrived at whereby the expense would be shared and the use of the machine be not so strictly limited to professional purposes.

Celeste.—In the proper circumstances the treatment is radical. Our correspondent's medical man could give her all information.

Mr. G. Leonard Hill.—We do not remember publishing any cases of the sort to which our correspondent is seeking reference.

"COOLING POWDERS."

AN inquest was recently held by Dr. Wynn Westcott on the body of a boy aged six years who was taken ill on June 27th. His mother gave him a cooling powder, but the child died next day. Mr. A. S. Dawson, in giving evidence, said that he found the child dead on his arrival on the 28th. This was the third case to which he had been called after the administration of one of these powders. They contained tartar emetic, and were sold quite promiscuously. The drug was a very depressing one, and the examination of the child's body showed that he had died from syncope following pneumonia. Death, he believed, was accelerated by the very hot weather and the depressing effect of the drug. A juryman remarked that it was a shame that poison could be sold to anybody who asked for it; but the coroner said that as the powders in question were a patent medicine and bore a government stamp they evaded the Poisons Act. The Medicine Stamp Act ought to be repealed. It is simply a premium upon lying and murder; for most patent medicines are useless, and many of them are harmful. We have said over and over again that all proprietary and patent medicines should only be sold in bottles, or packages, or boxes with the full formula legibly printed thereon. Then, if people still like to pay 4*s.* 6*d.* for a halfpennyworth of nitre or 11*s.* 6*d.* for a grain of perchloride of mercury, they can do it, but at present adventurers flourish unchecked, and it is quite time something was done to stop them, even though "commercial enterprise" be interfered with.

Dr. Thomas Laird is thanked for his communication. We will endeavour to ascertain if any practical experience of the treatment can be published.

J. S. will find the lecture printed in full in THE LANCET of June 24th, 1893.

E.P.P.—We cannot trace the receipt of the communication in question.

ITALIAN FOUNDLING HOSPITALS.

THE recent appalling revelations of the mortality in these institutions—revelations evoked last May in the Camera dei Deputati, when the mismanagement of the Neapolitan Brefotrofio was under discussion—have led to the nomination of a committee of inquiry into the whole subject—viz., the illegitimacy which gives rise to the system of foundling hospitals, the provocatives of that illegitimacy, and the distribution and administration of the hospitals themselves. The constitution of the committee is notably strong, made up as it is of high medical authorities like the Senators Durante, Tommasi-Crudeli, and G. Bianchi; the members of Parliament, Silvestro Piccardi, Professor Angelo Celli, F. Fede, U. Levi, P. Bertarelli; the commendatore L. Bodio; the engineer G. Speroni (President of the Provincial Council of Como), and the advocate Raffaele Perla To those of our correspondents who have written to us for information as to these hospitals we may recommend the committee's report (shortly to be made *publici juris*) as a document possessing all the guarantees of impartiality, thoroughness, and accuracy. For such of them, moreover, as require that information with the least delay possible we know of no better source than the "Atti Parliamentari" for the latter half of May, which, as the Italian equivalent to our own Hansard, may be procured through any bookseller. The Neapolitan Brefotrofio, we may add, is not under religious management.

THE CLIMATE OF CORSICA.

To the Editors of THE LANCET.

SIRS,—Would any of your numerous readers be kind enough to inform me as to the salubrity of the climate of Corsica?

I am, Sirs, yours faithfully,

July 18th, 1897. O. H.

A Practitioner of Twenty-five Years' Standing will agree with us that no parent's opinion concerning the reasons for a son's failure in examination will ever have public weight. Therefore, though in sympathy with the letter, we have judged that no useful object would be served by printing it.

A. H., M.B.—THE LANCET of Sept. 12th, 1896 (page 769) contains the information our correspondent requires. It is too long for us to transcribe here. There is an agitation in Italy to place that country in a position towards foreign medical men similar to that adopted by France and Switzerland.

Inquisitor has forgotten to enclose his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (31st).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Newcastle Weekly Chronicle, Salisbury Journal, Acton Gazette, Dundee Advertiser, Glasgow Evening Herald, East Anglian Daily Times, Birmingham Gazette, Brighton Gazette, Hull Daily Mail, Huddersfield Chronicle, North British Daily Mail, South Wales Daily News, Manchester Guardian, Times of Ceylon, Eastern Morning News, Liverpool Courier, Scotsman, Citizen, Bradford Observer, Derbyshire Times, Yorkshire Post, Architect, Western Mercury, Tottenham Herald, Bath Chronicle, Tamworth Mercury, New York Herald, Builder, Liverpool Daily Post, Sydney Morning Herald, Times of India, Pioneer Mail, Montreal Star, North Wilts Herald, Leicester Post, Evesham Journal, Herald of Wales, Wolverhampton Chronicle, Leeds Mercury, Halifax Guardian, Portsmouth Times, Carnarvon Herald, Devon Weekly Times, Sussex Daily News, Sheffield Telegraph, Bristol Mercury, Sanitary Record, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, City Press, Surrey Advertiser, Mining Journal, Local Government Journal, Christian World, Oswestry Advertiser, Sevenoaks Chronicle, Science Siftings, Eastern Counties Times, Derby and Chesterfield Reporter, Perthshire Advertiser, Melton Mowbray Mercury, West Middlesex Herald, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Arnold and Sons, Lond.; Anglo-Swiss Condensed Milk Co., Ltd., Secretary of; Ancoats Hospital, Manchester, Secretary of; Dr. S. A. Arany, Kassa, Hungary; Anderson's College Medical School, Glasgow, Secretary of.

B.—Dr. E. Baily, Oban, N B; Messrs. Burroughs, Wellcome, and Co., Lond.; Brussels Medical Graduates' Association, Lond., Hon. Secretary of; Borough of Lowestoft, Medical Officer of Health of; Dr. E. M. Brockbank, Manchester; Mr. A. Hinckes Bird, Lond.; Dr. John Bruce, Rothes; Dr. P. F. Bergmann, Wiesbaden; Boscombe Hospital, Bournemouth, Hon. Secretary of; Mr. C. Birchall, Liverpool; Mr. Banks, Bolton; Dr. L. S. Beale, Lond.; Birmingham City Asylum, Medical Superintendent of; Dr. L. Buchanan Glasgow; Messrs. Burgoyne, Burbidges and Co., Lond.; Herren Breitkopf and Härtel, Leipzig; Dr. E. T. Blank, Rovio, Switzerland; Mr. F. D Bennett, Lond.; Sir F. Bateman, Norwich; Mr. Blackett, Lond.; Birmingham and Midland Hospital for Skin Diseases, Hon. Secretary of; Dr. Bagshawe, St. Leonards-on-Sea.

C.—Dr. F. Graham Crookshank, Lond.; County of Chester, Medical Officer of Health of, Celeste, Newby Bridge; Mr. R. Brudenell Carter, Lond.; Mr. John Cahill, Lond.; Dr. J. A. Clough, Leeds; Messrs J. and A. Churchill, Lond.; Condal Waters, Ltd., Managing Director of; Mr. T. Cooke, Lond.; Messrs. Coxeter and Son, Lond.; Children's Hospital, Nottingham, Secretary of; Cortland Wagon Co., Lond; Mr. H. Connop, Reading; Mr. A. Court, Birmingham; Comaltana Wine Co., Heckmondwike; Dr. A. T. Cabot, Boston, U.S.A.; Cumberland Infirmary, Carlisle, Secretary of.

D.—Mr. R. Dunstan, Lond.; Herr E. Dieterica, Helfenberg.

E.—Messrs. Eason and Son, Dublin.

F.—Mr. W. H. Fuke, South Molton.

G.—Dr. E. Guntz, Dresden; Guest Hospital, Dudley, Secretary of; Mr. M. Gloag, Perth; Messrs. Gordon and Gotch, Lond.; Great Eastern Railway, Lond., Manager of; Government of Hong Kong, Acting Colonial Surgeon of; Dr. J. B. Gillam, Bromyard, Griffin, Lond.

H.—Mr. Otto Holst, Eastbourne; Mr. G. Leonard Hill, Dursley; Mr. C. H. Hulsh, Lond.; Messrs. Hertz and Collingwood, Lond.; Mr. R. Hill, H.M.S. *Victory*, Portsmouth; Mr. H W. Hoskyns, Lond.; Mr. R. Hill, Portsmouth; Health Committee Greenock, Medical Officer of; Hospital for Diseases of the Throat, Golden-square, Secretary of; Mr. E. Hancock, Southam.

I.—Messrs. Ingram and Royle, Lond.; Inquisitor, Lond.

J.—Dr. J. E. Jones, Dolgelly; Mr. John Jones, Liverpool; Dr. A. B. Judson, New York.

K.—K., Newcastle-on-Tyne; Mr. B Kühn, Lond.

L.—Mr. P. G. Lewis, Folkestone; Dr. T. Laird, Heywood; Mr. H. J. Lawrence, Cape of Good Hope; Ledger, Lond.; Dr. P. Leech, Halifax; Dr. T G Lyon, Lond.

M.—Dr P. McDougall, Sydney, N.S W.; Mr. Kenneth W. Millican, Cala., U.S.A.; Dr. P. W. MacDonald, Dorchester; Mr. J. W. McVittie, Manchester; Medical Department, Admiralty, Director General of; Mr. R. S. Miller, Windsor; Dr. C. D. Musgrove, Penarth; Medical Society of Victoria, Melbourne, Secretary of; Messrs. Macmillan and Co., Lond.; *Medical Council*, Philadelphia, U.S.A., Editor of.

N.—Nightingale Fund, Lond., Secretary of; National Telephone Co., Lond; North Riding Infirmary, Middlesbrough, Secretary of; Norfolk and Norwich Hospital, Norwich, Secretary of; Northern Optical Co, Bolton.

O.—Mr. W. Overend, Edmonton; Mr. Edmund Owen, Lond.

P.—Dr. E. P. Philpots, Bournemouth; Mr. A. G. Parrott, Bristol; Phœnix Food Co., Dublin; Misses E. and P. Putz, Lond.; Patella, Lond.; Purchaser, Lond.

R.—Dr. R. R Rentoul, Lond.; Royal National Hospital for Consumption, Ventnor, Secretary of; *The Rock*, Editor of; Royal Albert Hospital, Devonport, Secretary of; Royal Surrey County Hospital, Guildford, Assistant Secretary of, R, Lond; Messrs B Reece and Son, Llanelly; Mr. H. Rainbird, Saxleby; Messrs. Reynolds and Branson, Leeds; Messrs. Robertson and Scott, Edinburgh; Rotherham Hospital and Dispensary, Secretary of; Dr. H. Robarts, St. Louis, U.S.A.; Mr. H. A. Roechling, Leicester; Mr. Bernard Roth, Lond.

S.—Dr. W. J. Simpson, Calcutta; Mr. G. F. Shann, Stourbridge; The Bishop of Stepney; Dr. P. B. Smith, Aberdeen; Sunderland Asylum, Ryhope, Clerk of; Stourbridge Dispensary, Hon. Secretary of; Mr. W. H. Smith, Lond.; Messrs Street Bros., Lond.; Société Royale des Sauveteurs, Lond.; Mr. E. Stanford, Lond.; Stockport Infirmary, Secretary of; Messrs. Street and Co, Lond.

T.—Mr. J. Thomson, Blaenavon, Mon.; Messrs. Tucker and Son, Totnes

U.—University College, Liverpool, Dean of.

W.—Sir John Williams, Lond.; Dr. T. O. Wood, Lond.; Messrs. W. M. Wills and Co., Lond.; Mrs. E. Wright, Woodside; Westminster Hospital Medical School, Secretary of; W. B., Lond.; Wilts County Asylum, Clerk of.

X.—X. Y. Z., Liverpool.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E Adam, Liverpool; A F., Lond.; Ashwood House, Kingswinford, Proprietors of; A M Z, Lond.; A B, Lond.; Dr. J. Attlee, Lond.; Aspirator, Lond.; Dr. G. Agnew, Lurgan; Æsculapius, Lond.

B.—Dr. M. Beattie, Gotham; Bradford Infirmary, Secretary of, Mr. S. Boyd, Lond.; Mr. M. L. Bensusan, Lond.; Dr. J. I. B. Berkart, Lond.; Mr. L A Bidwell, Lond.; Mr. E S Bishop, Manchester; Mr. B Brown, Huddersfield; Be Traish, Edinburgh; Dr Bullmore, Falmouth; Brougham, Lond.; Mr H. R. H. Bigg, Lond., Mr G. S. L. Baines, Jarrow-on-Tyne; Dr J. L Bond, Ukiak City, U.S.A.

C.—Mr W. F. Cholmeley, Wolverhampton; Messrs. Cuffe Bros., Dover; Mr. H. Cripps, Lond.; C J., Lond.; Church Stretton Private Asylum, Secretary of; Messrs. A. Cohen and Co., Lond; Mr. J. Carter, Lond; Mrs. Clare, Baden Baden; Caustic, Lond.

D.—Mr. J T. Davenport, Lond.; Mr. G. H. Divan, Churchtown, Mr. L. B. Dhargalker, Bombay, India; Dr. J. C. Dunn, Lond., Durham, Lond.; D. R., Bristol; Mr. R. Davis, Lond.; Mr. A. Duprey, Trinidad.

E.—Dr. F. P Elliott, Walthamstow; Evelina Hospital for Sick Children, Lond., Secretary of.

F.—Miss M A Fergusson, Broughty Ferry; Fides, Lond.; F. W. J., Lond.; F. E. L., Brighton.

G.—Dr. C. G. Gibson, Launceston; Miss Gower, Boscombe; Grimsby News Co., Proprietors of; Mr. H. E. Girdlestone, South Malvern; Dr. R. Gondoux, Villeneuve; Mr. Gibbs, Redditch; G. A E I., Pontypridd; Dr B. Griffiths, Mardy; Dr J Gillett, Andover; Gann, Newcastle-on-Tyne.

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